THE PREVALENCE OF ANXIETY IN A GROUP OF 7 TO 13 YEAR OLD LEARNERS IN THE WESTERN CAPE

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STATEMENT

I, the undersigned, declare that the work in this assignment is my own original work and that I have not submitted it partially or as a whole to any university for the purpose of obtaining a degree.

ABSTRACT

A study of the relevant literature revealed anxiety disorders to be of the most prevalent psychiatric disorders of childhood. Prevalence is put at between1% and 20% in different studies. The purpose of this study was to gather data regarding the prevalence of anxiety in a group of learners in the Western Cape. Literature regarding the different etiological theories of anxiety, the classification of anxiety disorders, their prevalence, the living conditions of the child in South Africa and the assessment of anxiety in children were explored. The study further examined DSM-IV defined anxiety disorder symptoms in a large community sample of 7 to 13 year old learners in the Western Cape. This was done by a simple survey approach, using quantitative measures. Two self-report questionnaires were used, ie the Spence Children's Anxiety Scale (SCAS) and the Screen for Child Anxiety Related Emotional Disorders (SCARED). Results showed that the psychometric properties of the SCAS and the SCARED were moderate (convergent validity) to sufficient (reliability). The original factor structure of the SCAS and the SCARED did not emerge in this sample of learners, although factor analysis did yield evidence of the presence of a number of the hypothesised anxiety categories (ie social phobia, panic disorder, fears and generalised anxiety disorder). Results also indicated that a high percentage of the subjects reported serious anxiety symptoms, namely 22% on the SCAS and 25.6% on the SCARED. The most common anxiety symptoms of the learners in the Western Cape pertained to generalised anxiety disorder, separation anxiety disorder, social phobia, and obsessive-compulsive disorder. Studying the content of the most common responses revealed that symptoms referring to compulsive behaviours and physical separation from the parents were frequent.

OPSOMMING

'n Studie van die relevante literatuur het aan die lig gebring dat angsversteurings van die mees algemene psigiatriese versteurings tydens die kinderjare is. Die voorkoms daarvan wissel tussen 1% en 20%, en die doel van hierdie studie was om data oor die voorkoms van angs by 'n groep leerders in die Wes-Kaap in te samel. Literatuur oor die verskillende etiologiese teorieë rakende angs, die klassifikasie van angsversteurings, die voorkoms daarvan, die lewensomstandighede van die kind in Suid-Afrika, en die assessering van angs, is ondersoek. Daarna is angsversteurings soos gedefinieer deur die DSM-IV, ondersoek in 'n groot steekproef vanuit die gemeenskap, van 7- tot 13-jarige leerders in die Wes-Kaap. Dit is gedoen deur van 'n eenvoudige opname ontwerp gebruik te maak, en deur kwantitatiewe metodes te gebruik. Twee vraelyste waarin die subjekte inligting omtrent hulself verskaf, is gebruik, naamlik die Spence Children's Anxiety Scale (SCAS) en die Screen for Child Anxiety Related Emotional Disorders (SCARED). Resultate het aangetoon dat die psigometriese eienskappe van die SCAS en die SCARED matig (die konvergerende geldigheid) en voldoende (die betroubaarheid) was. Die oorspronklike faktorstruktuur van die SCAS en die SCARED het nie na vore gekom in hierdie steekproef nie. Faktoranalise het egter die teenwoordigheid van 'n aantal gehipotetiseerde angskategorieë aangedui, naamlik sosiale fobie, paniekversteuring, vrese en algemene angsversteuring. Resultate het ook getoon dat 'n hoë persentasie van die respondente die teenwoordigheid van ernstige angssimptome aangedui het, naamlik 22% op die SCAS en 25.6% op die SCARED. Die mees algemene angssimptome by die leerders in die Wes-Kaap het te doen gehad met algemene angsversteuring, skeidingsangs, sosiale fobie en obsessief-kompulsiewe versteuring. Simptome wat te doen het met kompulsiewe gedrag en fisiese skeiding van hul ouers, het die populêrste geblyk te wees.

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This thesis is dedicated to my late father who valued academic achievement very highly.

The use of the gender forms he/his/him should not be read as discriminatory, but as referring to both gender forms.

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1.1 INTRODUCTION

> "...there is no question that the problem of anxiety is a nodal point at which the most various and important questions converge, a riddle whose solution would be bound to throw a flood of light on our whole mental existence" Freud (1917/1963:393).

What is anxiety? Many philosophers, psychologists and psychiatrists have considered this question. According to Spielberger (1972:4), an interest in the concept of fear or anxiety can be traced back to Ancient Egyptian hieroglyphics and medieval philosophical works of oriental origin. The problem of anxiety is still being explored in contemporary literature, music, art and religion.

During the seventeenth century Spinoza described fear as a state of mind, a sign of weakness that could be overcome by reason. This rational approach to emotions was challenged by thinkers such as Nietzsche and Kierkegaard during the nineteenth century (May,1950, in Spielberger, 1972:4). In the same century, Darwin drew attention to the biological aspects of fear or anxiety and saw them as inherent attributes of man, to do with adaptation and survival during changing circumstances (Spielberger, 1972:4,5). Spielberger also describes the twentieth century as "the century of fear", using the French author Albert Camus' words.

WH Auden titled one of his poems the "Age of Anxiety". It would thus seem that man has involved himself since ancient times with the concept of anxiety, or interchangeably, fear.

The effect of of anxiety in our society is far reaching, as too much anxiety can be very harmful to a person and can interfere on his or her daily functioning in various negative ways (Barlow & Durand, 1995:152).

1.2 CONTRIBUTION TO AND ACTUALITY OF THE INVESTIGATION

Anxiety disorders are of the most prevalent psychiatric disorders of childhood. According to the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV; American Psychiatric Association [APA], 1994:393-444), the prevalence of anxiety disorders amongst the American population ranges between 1% and 13%. Panic disorder and specific phobias have bimodal patterns of age of onset, with one peak each in late adolescence and in childhood respectively. The prevalence of separation anxiety is estimated at 4% in children and young adolescents. Costello and Angold (1995:111-113) estimate that the presence of any anxiety disorder in a community sample of children ranges between 5.7% and 17.7%, with half of them exceeding the 10% rate. Bell-Dolan, Last and Strauss (1990:759) quote figures of up to 20% in community sample studies. According to Bernstein, Borchardt and Perwien (1996:1110), it could be as high as 15.4%, basing their argument on a pediatric primary care sample. Silverman, Ginsburg and Kurtines (1995:93-117) put the figure for children who manifest

pathological fears and anxieties at 17%.

It must be kept in mind that internalising problems such as anxiety, fears, social withdrawal and hypersensitivity affect the success with which children negotiate the various developmental challenges of childhood and adolescence (Kendall, Kortlander, Chansky & Brady, 1992:869-880). Research has also indicated that anxiety during childhood has a negative impact on academic success (Dweck & Wortman,1982) and on social adjustment (Strauss, Lease, Kazdin, Dulcan & Last, 1989), with implications for adult functioning. Kumpalainen, Räsänen, Henttonen, Puura, Moilanen, Piha, Tamminen and Almqvist (1999:48,49) report that there is a relation between emotional problems such as anxiety, and learning problems in school (this includes mainstream as well as special education learning environments). According to Meadows (1993:359) there is an interrelatedness between emotional states and cognition. In a significant number of studies, adults with anxiety disorders report that they suffered from anxiety symptoms as children (eg Last, Hersen, Kazdin, Francis & Grubb,1987:1583; Weisman, Leekman, Merikangas, Gammon & Prusoff, 1984:845). Should it be possible to identify and address these anxieties of childhood, it could have far-reaching positive and preventative effects on the lives of these people.

Most of the research that has been done on children's fears and anxieties, has been done in Western societies (Elbedour, Shulman & Kedem, 1997:491). It is important to know whether the normative data and also the prevalence rates obtained in Western countries, can be extended to a South African population

with its unique composition. Van Eeden found in 1989 that she could not discern significant differences between South African boys and girls with regard to anxiety. Snyman (1998:336) however, found that 2% to 5% of 11 to 13 year olds, living in the rural areas of South Africa, experienced high anxiety levels, which is similar to findings in epidemiological studies done in Western countries. It is important to ascertain the extent to which the prevalence of anxiety among South African children and the manifestation of anxiety in South African children are similar to those in Western countries. The validity of questionnaires developed elsewhere and then used in South Africa should also be examined. The political history of South Africa, the diversity of cultures prevalent in South Africa, the state of the economy and the resultant poverty, to name but a few factors, may well constitute a unique living environment for the children which could lead to different findings.

While some fears and anxieties significantly impede on adaptive functioning, many childhood fears and anxieties are of short duration, are part of an integrated and interactive developmental process (Donald, Lazarus & Lolwana, 1997:60) and lessen with age. These do not necessarily require treatment (Ronan, 1996:67). It is important, though, to present normative information and reassure clients and their caregivers with regard to their symptoms by placing them within a normative background (Kendall & Ronan, 1990 in Ronan, 1996:67). It is obviously important, then, to be able to gather such normative information. The availability of suitable instruments with which such data can be gathered is of the utmost importance.

Structured and semi-structured interviews are impractical and time-consuming, especially with non-clinical samples. Self-report questionnaires with good reliability and validity, that can be used for screening purposes are needed. Spence (1997:291) found that anxiety symptoms in a community sample of children, cluster around the different disorders described in the DSM-IV (APA, 1994). She developed the Spence Childhood Anxiety Scale (SCAS). The Screen for Child Anxiety Related Emotional Disorders (SCARED) was developed in 1997 by Birmaher, Khetarpal, Brent, Cully, Balach, Kaufman and McKenzie, and appears to have similar characteristics. The SCAS and the SCARED are two self-report questionnaires which seem to give particular attention to anxiety symptoms in groups which compare to the different diagnostic categories of the DSM IV(APA, 1994) (Birmaher et al,1997; Muris, Merckelbach, Gadet, Moulaert & Tierney,1999; Muris, Merckelbach, Mayer, van Brakel, Thissen, Moulaert & Gadet ,1998 and Spence,1997).These instruments need to be examined for their psychometric properties when applied in a South African population.

Professor Peter Muris from the University of Maastricht in the Netherlands, has done extensive research in the field of anxiety in childhood in general, and more specifically with the two questionnaires mentioned earlier, the SCAS and the SCARED. He approached the Department of Educational Psychology of the University of Stellenbosch in 1999 for collaboration on cross-cultural research regarding anxiety in children, using the SCAS and the SCARED. With the help of researchers from Stellenbosch, he wanted to compare anxiety among a sample of South African children with data from a European sample. He asked

the researcher to determine whether the psychometric characteristics of the two questionnaires and their factor structure compare favourably when used on a sample of South African children.

This study formed the independent South African leg of the investigation.

1.3 FORMULATION OF PROBLEM

A comprehensive study which provides data regarding the prevalence of DSM-defined anxiety disorders in children in South Africa has not recently been undertaken. It was felt that should such epidemiological information become available for South Africa, it could be compared to similar data obtained in Western countries. This would shed light on the generalisibility of research results to South African circumstances. The two self-report questionnaires, the SCAS and the SCARED, could then be utilised as screening instruments that could be used in preventative work, diagnosing and treating anxiety symptoms at an early age and thus preventing their continuation into adulthood. This was dependent on the psychometric properties of the questionnaires proving satisfactory.

In situations where the symptoms of anxiety represent normal developmental stages, information obtained by means of the questionnaires and further research done with it, could be useful in normalising such symptoms and thus preventing the pathologising thereof. This could lessen some of the side-effects

like low academic achievement and poor socialising capacity.

It seemed imperative to have a sample of South African children fill out these questionnaires, to investigate the psychometric properties of the instruments and to determine the prevalence of DSM-defined anxiety symptoms and disorders amongst South African children.

1.4 STATEMENT OF OBJECTIVES

The objective of this study will be to answer the following questions:

1.4.1 What are the psychometric properties of the SCAS and the SCARED as applied in a sample of learners in the Western Cape?

1.4.2 Do the childhood anxiety levels of Western Cape learners cluster into categories that are in keeping with the anxiety disorders as described in the DSM IV?

1.4.3 What is the prevalence of anxiety in a sample of learners in the Western Cape ?

1.4.4 What is the content of the prevalent anxiety symptoms in a sample of learners in the Western Cape ?

1.5 HYPOTHESES

The following hypotheses were postulated:

1.5.1 The psychometric properties of the two questionnaires, the SCAS and the SCARED, will prove sufficient in a sample of learners in the Western Cape.

1.5.2 The childhood anxiety symptoms, as measured by the SCAS and the SCARED, of learners in the Western Cape, will cluster into categories in keeping with the anxiety disorders as described in the DSM-IV.

1.5.3 The prevalence of anxiety symptoms, as measured by the SCAS and the SCARED, in a sample of learners in the Western Cape, will correspond with figures obtained from research in other parts of the world, taking into account differences with regard to gender, age and socio-economic status.

1.5.4 The content of prevalent anxiety symptoms, as measured with the SCAS and the SCARED, in a sample of learners in the Western Cape, will correspond with that in children from other parts of the world.

1.6 DEFINITION OF CONCEPTS

1.6.1 Anxiety and Fear

The Concise Oxford Dictionary (1976) describes anxiety as "concern about the future, a morbid state of uneasiness". The word stems from the Latin word *angere*, which means "to choke". Fear is described as a painful emotion caused by impending danger or evil, a state of alarm. The second meaning given is dread and reverence, as in "the fear of God". Researchers tend to define the two terms according to their specific theoretical orientations. Ligthart (1964), for instance, described the anxiety affect as a surge of emotion similar to fear. This emotion is an unpleasant one and the need for relief is urgent. According to him it follows a specific cue and also leads to evasive action as a result of physical changes in the nervous system and viscera. Weiss and English (1957) in Edelman (1992: 2) state that anxiety is "an unpleasurable state of tension which indicates the presence of some danger to the organism". Spielberger (1972:10), on the other hand, quotes Izard in arguing that anxiety is a pattern of emotions, an emotional reaction on multiple levels, and that it includes fear as well as other basic emotions. Spielberger himself describes anxiety as an unpleasant emotional state or condition which is characterised by subjective feelings of tension, apprehension, and worry, and by activation or arousal of the autonomic nervous system. Yet another definition is offered in Edelman (1992: 1). According to him, Simpson (1980) describes anxiety as follows: "It is a personality characteristic of responding to certain situations with a stress syndrome of

responses. Anxiety states are then a function of the situations that evoke them and the individual that is prone to stress." Within the social constructivist paradigm, Hallam (1985:171) suggests that anxiety is essentially a lay construct that can refer to very different cognitive and somatic experiences in different persons.

Alloy, Jacobson and Acocella (1999:150) focus on the effect anxiety has on human functioning. They call anxiety a state of fear that affects many areas of functioning. According to them it involves three basic components, namely (i) subjective reports of tension, apprehension, dread and expectations of inability to cope, (ii) behavioural reactive responses and (iii) physiological responses. They maintain that anxiety is an integral part of human existence. According to them all people feel it some time or other, and in moderate degrees. They quote a researcher Paul, who said: "Without it we would probably all be asleep at our desks". It also protects people against dangers. The amount of time that people feel anxious, clarifies whether it is an adaptive response or not. When people feel it all the time it becomes distressful and maladaptive.

Barlow and Durand (1995: 151) define it similarly as a "mood state characterized by marked negative affect and somatic symptoms of tension in which a person apprehensively anticipates future danger or misfortune".

Hersov (1985:370) sees anxiety according to the learning theories as a hypothetical construct that mediates the escape and avoidance responses which

are based on the S-R (stimulus-response) theory of learning.

Martalas (1999) defines fear as a normal reaction to a real or imagined threat, which goes away as soon as the threatening object is removed. She stresses that fear consists of three components, namely behavioural expressions, subjective feelings as well as physiological changes.

According to Barlow (1988:70) fear is differentiated from anxiety by causality, the pattern of responses that they elicit and the cognitive appraisals that mediate the responses.

It would seem as though there are more similarities, the experiences and the effects for instance, between the two concepts of fear and anxiety, than differences, which consist mainly of the origins of the emotion. Some writers think that anxiety is the most important underlying condition, some think fear is the primary condition, some differentiate very definitely between the two, and some are of the opinion that the two concepts basically refer to the same condition (Van Eeden, 1989).

In learning theory the distinction between the two terms is important. Spielberger (1972:12) quotes Epstein as distinguishing between them in terms of whether or not the arousal evoked by the threatening circumstances is channelled into appropriate purposive action. Fear leads to defensive action, while anxiety is regarded as a state of unresolved fear (Shand, 1995:33).

After studying the literature, Van Eeden (1989) arrives at the following conclusions:

- Fear and anxiety are in more ways the same, than different, both encompass the same components, with anxiety as the undertone, and fear as the actualiser.
- The main difference seems to be that fear can be translated into behaviour more easily than anxiety, and thus relief is a bigger possibility when fear is involved.
- The cause of fear and anxiety can be internal or external, with or without object.

It would thus seem that the two terms can be used interchangeably to some extent. Set in the context of the discussion of definitions so far, Snyman's summary (1998) of the different components of anxiety (including a reference to fear) will be used for the purposes of this study:

- It is an unpleasant emotion.
- It is a subjective experience of fear.
- There is a feeling of danger that cannot be ascribed to a specific object or cannot be associated with a specific situation.
- The emotional state that is being evoked does not correspond with the danger or the situation.
- Anxiety has cognitive components
- Intensified vigilance as well as powerlessness is experienced.
- Normal and clinical anxiety can be distinguished

- Physical symptoms are present.
- Fear is a response to a definite identifiable stimulus, in other words a realistic danger.
- Fear is a response of shorter duration than anxiety, because it is coupled with a specific known stimulus.
- Fear is a response with a higher intensity than in anxiety.

The term anxiety as used in this study will then include concepts of anxiety as well as fear.

1.6.2 The Age-group 7 to 13 Year Old

1.6.2.1 Introduction

The time between the sixth and the twelfth/thirteenth year are commonly called middle-childhood (Louw, 1990:325). It is difficult to put precise age limits to such a stage, but middle-childhood could be seen as the part of a child's life from starting school, with all the changes that it encompasses, until he reaches adolescence. It would thus seem fair that 7 to 13 year olds will fall in this developmental stage.

This stage would correspond with the latency stage that Freud described. According to Freud (in Louw, 1990:325) the stage is characterised by the fact that no erogenous zone comes to the fore. It is dominated by the child's

identification with the parent of the same gender. The child keeps him/herself busy with friends of the same gender, and it is also a stage of learning in informal ways through play and vicarious learning what is appropriate behaviour for his or her specific gender.

Criticism against Freud's classification of developmental stages is that he concentrates on psychosexual development only, that according to him development basically stops by the age of six or seven, and that his data on which he based his theories came mostly from clinical samples and not community samples (Louw, 1990:58-59).

When looking at Erikson's stages of development , the middle-childhood stage corresponds with his stage of industry versus inferiority (Corey, 1977:23). The child focusses on learning tasks that he or she will need to be able to do in adult life, mostly in school. It is important for the child to experience success. Social skills also develop through play and peer friendships and competition.

1.6.2.2 Physical development

According to Louw (1990:326), the growth tempo slows down somewhat after the intense growth and physical development of the first few years of a child's life. During this stage proportions change , so that the child's body starts to resemble that of an adult. The brain, heart and lungs reach their adult proportions and the permanent teeth appear during these years. Because there is an increase in

power, coordination and muscle control, the development of psychomotor skills is very important (Newman & Newman, 1987).

1.6.2.3 Cognitive development

As learning forms such an integral part of the middle-childhood stage, it would follow that cognitive development takes place at a rapid rate during these years. It seems appropriate therefore to highlight the ideas of two major theorists regarding cognitive development, namely Piaget and Vygotsky (Donald et al, 1997:42; Green, 2001:81-86).

According to Piaget people progress through four stages of cognitive development between birth and adulthood. Cognitive development can be seen as gradual orderly changes by which mental processes become more complex and sophisticated (Slavin, 1994:31). The concrete operational stage would be approximately from 7 to 11 years of age. During this stage there would be an improvement in ability to think logically. It would become possible to perform a mental operation and then return to the starting point again (reversibility) and it would be possible to consider more than one fact at the same time. Abstract thinking would only start to become possible after 11 years of age. Before that thinking will be based on concrete facts (Slavin, 1994:34).

Piaget sees the process of acquiring new information as one of assimilation and adaptation. New information is assimilated and made part of an existing schema

and/or existing schemas are sometimes adapted to accommodate the new information. These processes of accommodation and assimilation are called equilibration, reflecting the human need for equilibrium. This could shed light on the processes involved when children experience adverse life circumstances and the resultant emotional and behavioural consequences thereof, amongst them anxiety (Slavin, 1994:33).

The most important contribution from Vygotsky's theory regarding cognitive development, is an emphasis on the sociocultural nature of learning (Kozulin & Presseisen, 1995:68; Slavin, 1994:49; Vygotsky, 1978). He emphasises that learning takes place when children are drawn into their zone of proximal development, which refers to a level of development just above a person's present level. This would imply that another person is needed for the learning to take place, which is precisely what Vygotsky theorised. According to him cognitive development takes place as a result of mutual interaction between the child and those people with whom he/she has regular social contact (Sutherland, 1992:42). He argued that the individual child learns to think by a process of internalising external and social activities and making them part of his/her own mental structures.

This could shed light upon the intricate and complex relationship between the anxious child and his/her environment and the interaction between him/her and the context in which he/she lives and develops (see synthesis in 2.1.2.6). During middle-childhood major roles are played by family, teachers and peers, in the

cognitive development of the child.

1.6.2.4 Moral development

Piaget proposed a definite relation between cognitive and moral development (Louw, 1990:358). According to him the child aged between 5 and 10 finds him/herself in a phase of "moral realism" or a "morality of force". This would refer to a child looking upon rules as absolute and non-changeable: they must be obeyed at all costs, without any possible exceptions. It could be hypothesised that such a moral code could lead to a significant amount of anxiety, should circumstances make obedience difficult.

Kohlberg described the middle-childhood child as hovering between phases where the child obeys rules to receive rewards, or later also to be accepted (Louw, 1990:360). This would also place children in a position where they feel a loss of control, thus leading to possible anxiety.

According to Fowler (1981:135) the child of 7 to 13 years old is usually in the mystical literal phase of religious development. This would imply amongst other aspects, that they are still very much in the concrete world of sensory perception. They develop the ability to see themselves in the position of other people during this phase. They also rely greatly on older people like parents and teachers. According to Roux (1994: 14) typical characteristics like social status, religious involvement and attachment to one's nation are important during this stage of

development.

1.6.2.5 Emotional and social development

According to Van der Zanden (1989) in Louw (1990:362), children's understanding of their emotions develops considerably during their middle childhood years. They learn to ascribe emotional arousal to internal reasons, they become aware of social rules with regard to the showing of emotion, they learn to read facial expressions with regard to emotional messages, and they begin to understand that emotions could be changed by, for instance, thinking about something else. During this phase children also learn the vocabulary with which to describe emotions.

During middle-childhood children develop from an egocentric approach to a sensitive approach towards other people (Van der Westhuÿsen & Schoeman, 1988, in Louw, 1990:376). Peer friendships become increasingly important. Because such a great deal of time is spent in school, interrelationships with teachers and other adults play a significant role. As in other stages of childhood the family and relationships within that intimate group, also forms an important part of the child's context.

1.7 RESEARCH DESIGN

1.7.1 Introduction

A research design can be seen as a plan or "blueprint" of how the research is going to be conducted (Mouton, 2001:55). It encompasses the various steps that will constitute the whole research process, and therefore determines the end product, or the kind of result that is being aimed at. It also provides a point of departure: what is the research problem? Then it focusses on the logic of the research, thus ensuring that the data produced by the research will address the research question adequately (Mouton, 2001:56).

The research design for this study is determined by the objectives stated in 1.3. These objectives represent the point of departure of the study as well as the end product that is aimed at. It fits into the post-positivist paradigm of research as further described in Chapter 3 and is quantitative in nature, implementing a simple descriptive survey approach. "The simple descriptive approach is a one-shot survey for the purpose of describing the characteristics of a sample at one point in time" (Mertens, 1998:108). Fowler (1988) in Creswell (1994:117) describes a survey as a design that provides "a quantitative or numeric description of some fraction of the population - the sample - through the data collection process of asking questions of people".

As this study is a survey of the prevalence of anxiety among primary school

children in the Western Cape, it has certain strengths and limitations that Mouton (2001:153) ascribes to surveys:

> **Strengths**: if appropriate sampling was done, it would be possible to generalise to larger populations; high measurement reliability if proper questionnaire construction and high construct validity if proper control have been implemented.
>
> **Limitations**: there could be lack of depth and insider perspective which could lead to criticisms of 'surface level' analyses; survey data are sometimes very sample and context specific.

1.7.2 Method

Data collection methods consisted of a literature review as well as the collection of data by means of a simple descriptive survey approach. The purpose was to describe the characteristics of the sample at one point in time (Mertens,1998:108), and also to examine the psychometrical properties of the instruments used in the survey.

1.7.2.1 Literature review

Before embarking on the research project, it was important to consider the work done in the field of study. Mouton (2001:87) suggests starting by reviewing "...the existing scholarship or the available body of knowledge..." to see how other

scholars have approached the specific research area. Such a literature review is usually the first step in an empirical study and provides a framework from which to conclude where this study fits into the bigger picture (Mertens, 1998:34; Mouton, 2001:86).

The criteria for a good literature review are as follows:

- It should cover as much as possible of the main aspects of the study.
- Authors should be treated fairly by the scholar, in other words work should not be approached with a pre-set interpretation.
- The literature reviewed should be recent and directly connected to the topic that is being researched.
- The review must be logically and well organised.

  (Mouton, 2001:90,91)

The literature review in this study, will be conducted in order to

- explore the various theories of anxiety, with regard to the etiology, such as the psychoanalytical approach, learning theories, biological theories and cognitive theories;
- investigate the classification of anxiety disorders;
- explore the incidence of anxiety disorders in childhood;
- explore the living circumstances of the child in South Africa at the moment; and
- explore the various ways of assessing anxiety in children.

1.7.2.2 Population and sample

The population of this study is 7 to 13 year old learners in the Western Cape. A convenience sub-population of all such learners in the Stellenbosch area was decided upon (Boshoff, 2001, personal communication). The sample was obtained using the quota sample method (Huysamen, 1996:46; Judd, Smith & Kidder, 1991:134,135). Every effort was made to obtain the same proportions of learners in the subgroups pertaining to ethnic groupings as in the population composition of the Western Cape, as well as equal distribution concerning gender, age-groups and different socio-economic groups. The subjects in each group were obtained purposefully, by selecting the learners from one class in each case from grade 3 to grade 7, from four different primary schools in the Stellenbosch area in the Western Cape. The specific class was decided upon by the principals of the schools, taking into account certain practicalities which would allow for the least possible disruption of the school routine. These schools were selected for their approximate ethnic composition, and also for the fact that they represented different socio-economic groupings. Van der Merwe (2001) describes this method as a representative sample for it is presumed that it is typical of the population that it represents. Although Creswell (1994:120) recommends random sampling where each individual in the population has an equal chance of being selected, there were several practical considerations which persuaded the researcher to opt for a more convenient although less rigorous method of sampling which will be discussed in Chapter 3.

1.7.2.3 Instruments

The two questionnaires used in this study were the Spence Childhood Anxiety Scale (SCAS) and the Screen for Child Anxiety Related Emotional Disorders (SCARED).

1.7.2.4 Procedure

After obtaining permission from the Western Cape Education Department, the four schools were contacted and the proposed study explained to the principals. Once they expressed their willingness to co-operate, appointments were made for the questionnaires to be filled in. Four research assistants were trained to assist with the procedures.

The learners described in 1.6.1.2 filled out the questionnaires, with half of them doing the SCAS first and the SCARED second. The other half did it in reversed order. They were assisted by the research assistants mentioned above, and their respective teachers were also available for help and clarification.

1.7.2.5 Data analysis

To examine the psychometric properties of the questionnaires, Cronbach's alphas were calculated for the two questionnaires respectively, and also for the different subscales of the questionnaires. Means, gender differences and

relationship with age were also calculated. The correlations between the SCAS and the SCARED, while controlling for gender and age, were calculated. The data from the SCAS and the SCARED were subjected to a principal components factor analysis. An oblique (oblimin) rotation was used as correlated factors were hypothesized. The means of the SCAS and the SCARED scores in the different schoolgroups were calculated and analyses of variance with age and gender as covariates (ANCOVAs) were done. The SCAS and the SCARED subscales were subjected to multivariate ANCOVAs. For both the scales, each average score was compared with the average of the Likert scale, in order to obtain the percentage of subjects whose responses could be seen as more anxious. For both the scales, the 10 most common anxiety symptoms were singled out.

1.8 PROGRAMME OF STUDY

Chapter 2 consists of an overview of the literature concerning the different theories of anxiety, the classification of anxiety disorders in childhood, as well as the incidence thereof. The context in which the child in South Africa finds him/herself is discussed as well as various means of assessment of anxiety in children.

In **Chapter 3** a few introductory comments on the nature of research and the terminology that is used, are followed by a description of the method of research used in this study. The findings are also presented and discussed.

In **Chapter 4** conclusions based on the findings of this study, their implications, any limitations of the study that were identified, and recommendations for further research, are presented.

Chapter 2

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, an overview of the main aspects pertaining the subject of anxiety amongst children in South Africa based on a review of the relevant literature will be presented. First the different general theories regarding the etiology of anxiety will be explored. Secondly, the classification of anxiety disorders as is applicable to childhood, will be outlined. Thereafter the incidence of these anxiety disorders in childhood is examined. Next, the context of the child living in South Africa at present is described. Lastly the different instruments available to assess anxiety in children are reviewed. A summary of the literature concludes the chapter.

2.2 THEORIES OF ANXIETY

2.2.1 Psychoanalytical Approach

According to Barlow and Durand (1995:25), Sigmund Freud identified three parts of the mind, each with its own function:

- the id,
- the ego, and
- the superego.

The id could be seen as the source of human sexual and aggressive energy, the basal drive behind our actions. Should it be left unchecked, it could lead to behaviour with a very negative impact. Freud saw the id as operating in the human unconscious. The ego is the conscious part of the mind that ensures realistic behaviour. It operates with logic and reason, as opposed to the illogical and irrational nature of the id. The third structure, the superego, represents morality and conscience - it superimposes values and morals on all actions and serves as the countermeasure against the potentially dangerous drives of the id (Barlow & Durand, 1995:25).

Freud saw anxiety as the ego's reaction to the uncontrolled and dangerous forces of the id: the ego being in the middle between the id and the superego. He saw the primary function of anxiety as the motivation of the ego to use defence mechanisms such as repression, to control the underlying drives (Shand, 1995:39). He distinguished between normal and neurotic anxiety. Normal anxiety would not be disproportionate to circumstances and would not require neurotic defence mechanisms such as repression, dissociation, denial or regression as a few examples.

- Repression: This keeps potentially threatening ideas, feelings, memories, wishes or fears out of awareness (DSM IV, 1994:765). By repressing these unwelcome concepts to the subconscious, anxiety is reduced.
- Dissociation: Detachment from a person's self or from his reality

also constitutes an anxiety reduction method (Barlow & Durand, 1995:26).

- Denial: When the person tries to avoid recognition of the magnitude of the threat, he does not acknowledge the anxiety-arousing aspects of the environment (Sarason & Sarason, 1989:68).
- Regression: By regressing to an earlier developmental stage, it is sometimes possible for the person to deal with the anxiety-provoking circumstance with older, more established behaviour patterns (Sarason & Sarason, 1989:68).

Such defence mechanisms could be either adaptive or maladaptive, depending on the inflexibility thereof, the severity thereof and also the context in which they occur (DSM IV, 1994:765)

2.2.2 Other Psychoanalytic Perspectives

According to Crosby (1976:238-239), Carl Gustav Jung believed that anxiety is the resulting emotion when a person's conscious mind is invaded by irrational forces and images from his collective unconscious. Otto Rank's theory stemmed from his interest in birth trauma. He said that anxiety is caused by all the incidents of separation in a person's life. Birth is just the first one, followed by weaning, going to school, leaving home, marriage and then death (Crossby, 1976:239).

According to Alfred Adler the cause of anxiety lies in feelings of inferiority. This implies an interpersonal, social and even cultural side to the phenomenon, which differs greatly from Freud's view (Shand, 1995:47).Crossby (1976:239) relates Karen Horney's views as follows: The child needs to express hostility towards the parents, but also needs the parent's love. Conflict ensues between these two needs and anxiety is the outcome. Harry Sullivan maintained that anxiety resulted when there were disturbances in interpersonal relationships (Crossby, 1976:241).

Thus there are widely differing theories concerning anxiety within the same school.

2.2.3 Learning Theory Perspectives

According to the learning principles of classical and vicarious conditioning, anxiety is the result of these different processes. As early as 1920 fears were established in laboratory settings through classical conditioning. According to Teichman, Ben-Rafael and Gilaie (1990:59), these fears were considered analogous to phobias and neurotic anxiety.

Classical conditioning can be defined as follows: The process begins with a stimulus (unconditioned) that would elicit a response in almost anyone and which requires no learning. This response is the unconditioned response. Any person or object that becomes associated with the unconditioned stimulus would then

acquire the power to elicit that same response, which would then be called the conditioned response. According to Slavin (1994:155), this was how Pavlov described the classical conditioning process.

Berger (1985:187) contends that fears are acquired through conditioning. He maintains that the originally neutral stimuli associated with fear or pain-producing events have the power to evoke fearful reactions as a result of a conditioning process. Recent research by Muris, Merckelbach and Collaris (1997:936) confirms this. They found that conditioning was the most commonly reported pathway related to the onset and exacerbation of fears.

A vicarious conditioning process can also lead to anxiety reactions according to Bandura (1977). He assumes that people acquire their emotional repertoire by observation rather than by experience. There is a reciprocal relationship between a person and his environment. Bandura (1978:344-358) calls it "reciprocal determinism". People are influenced by their environment, but they also influence and even control it in a way - it is thus a two-way process. In contrast with psychoanalytical theories, this is not seen solely as an intrapsychic process, but as thoughts, feelings and behaviour which result from continuous interaction between internal and environmental factors (Teichman et al, 1990:60).

2.2.4 Anxiety as Biology

It is also important to consider several biological models of anxiety. Although

most theorists admit that some biological aspects play a role, there are some who consider them as primary.

When looking at the sources of anxiety as genetic, it is useful to define the differences between the terms state-anxiety and trait-anxiety. State-anxiety refers to the intensity of the feeling at a specific time, where as trait-anxiety refers to feelings which are present most of the time (Spielberger, 1972:10). State refers to an emotional reaction to specific circumstances while trait refers to a more fixed tendency to react in such a way. The concept trait-anxiety thus implies that a person has a certain biological/genetic attribute.

Some of the biological theories include autonomic nervous system reactivity which feeds back to influence limbic system activity. Anxious individuals would appear to have a tendency towards high autonomic nervous system reactivity as well as high resting levels of cortical arousal. Eysenck (in Barlow,1988:46) refers to people with a lower level of arousal as introverts as compared to extroverts who need a greater amount of stimulation.

Gray (in Barlow,1988:47) uses a behavioural inhibition system in his model of anxiety. This system consists of the septal-hippocampal system, its monoamine afferents, and the frontal cortex. This behavioural inhibition system suppresses ongoing behaviour and inhibits certain reactions. Should this system be active and sensitive and react to novelty or punishment with exaggerated inhibition, it would give rise to anxiety.

According to Barlow (1988:48), Cloninger supports Gray's model and suggests that high harm avoidance, combined with low reward dependance and low novelty seeking, adds to individuals developing strong patterns of recognising hidden threats and therefore overestimating potential risks in ordinary circumstances. This would give rise to traits of anxiety.

Barlow and Durand (1995:157) state that the neurotransmitter system most implicated in anxiety is the GABA-benzodiazepine system. Lower levels of this neurotransmitter are associated with higher levels of anxiety. The noradrenergic and serotonergic systems have also been implicated, especially the serotonergic system.

Recent research has confirmed that one psychological risk factor for the development of panic disorder - anxiety sensitivity - may have an inheritable component (Stein, Jang & Livesleyl, 1999:246), which seems to confirm the biological element of anxiety.

2.2.5 Anxiety as Cognition

The relationship between cognition and emotions has been thoroughly explored. According to Barlow (1988:52-53), Spielberger (1972, 1979, 1985) considers anxiety as a personality trait. This trait determines whether certain stimuli from the environment are seen as either anxiety-provoking or not. Internal stimuli, like a feeling of pins and needles for instance, will be appraised by the individual in

such a way as either to produce anxiety or not. This leads to the assumption that the act of appraisal determines whether the stimulus is anxiety-provoking or not.

In anxiety disorders the centre of the problem according to Beck (1985, in Barlow, 1988:53) lies in hypervalent cognitive schemata where reality is continually interpreted as dangerous. Distorted interpretations of information coming either from the person himself or from his environment lead to automatic thoughts associated with anxiety. These automatic thoughts trigger certain physiological and emotional reactions which constitute the anxiety response.

Eysenck (1997:54) put forward a new four-factor theory of trait-anxiety, as is best explained in Figure 1.

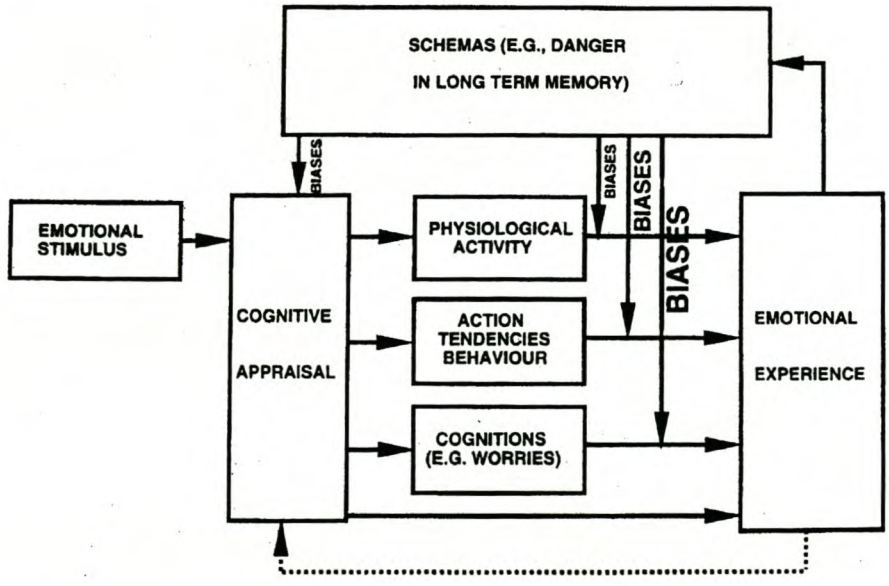

Fig. 1 Schematic representation of Eysenck's new four-factor theory of trait-anxiety (Eysenck, 1997).

Hallam (1985:171,172) brings another angle to the cognitive theories about anxiety. In the pattern of the social constructivists, he concludes that anxiety is a multi-referential lay construct. He suggests that anxiety is a metaphor for a construction of a combination of elements. These may include intrapersonal as well as external elements. This is in sharp contrast to the perception that anxiety is an actual entity encapsulated within the organism as is deduced from the biological model for instance.

Among the elements that contribute to an individual's construct of anxiety are specific and contextual environmental events, sensory feedback from autonomic and other somatic processes, overt and covert behaviour (eg escape, facial expressions) and combinations of these. Added to this are cognitive schemata representing beliefs and attributions of causality. "Only by untangling the functional relationship of these many referents in a given individual, in the context of how he or she construes them, can we say anything about the nature of anxiety" (Barlow, 1988: 56). These ideas must be kept in mind when discussing the living conditions of children in South Africa. In their unique circumstances, the formation of unique cognitive schemata is possible.

In conjunction with the above-mentioned ideas, is Costanzo, Miller-Johnson and Wencel's (1995:85-94) concept of the social developmental tasks which underlie the formation of self-efficacy in the child. They argue that the cognitive and behavioural components of organisation and behavioural control are the most important tools that permit the child to reduce uncertainty and ameliorate fear.

These skills are acquired through social contact with caregivers and peers. This corresponds with Vygotsky's (1978) theory regarding the cognitive development of children as well as the concept of vicarious learning that Bandura (1977) has proposed.

2.2.6 Synthesis

Barlow and Durand (1995:158) plead for an integrated model of anxiety. A person might inherit a tendency to be uptight or highly strung. This would be a biological vulnerability to experiencing anxiety, but not anxiety itself. A psychological vulnerability would encompass the perception that you are not able to control your circumstances. This could be because of earlier experiences and thus be learned or because of your cognitive constructs. You might also have a lot of actual stress in your life, whether it is physical, interpersonal or existential. "A given stressor would then activate your biological tendencies to become very aroused as well as your psychological tendencies to feel that you might not be able to deal with the situation and control the stress" (Barlow & Durand, 1995: 158). This anxiety might tend to feed on itself so that once it starts, it might not stop even though the particular life stressor has long passed.

When considering all the different theories, it would seem that to form a definitive theory regarding anxiety would be problematic for the following reasons:

- Multicausality - it would seem as though there are virtually an

unlimited amount of possible causes for anxiety

- Correlation and causality - The question is always whether the factors that correlate with the incidence of anxiety, actually cause it. (Engelbrecht, 1998)

That means that a meta-theoretical approach which provides for non-linear cause-effect relations seems necessary. Such a frame of reference does not constitute a theory, it functions as a paradigmatic scheme. In other words it refers to a way of thinking about a human being and his life and all the information about him. A theory can be defined as an explanatory framework which orders and makes connections between currently known observations and information. Theories are not fixed; they are always evolving (Engelbrecht, 1998).

A second function of such an approach is to provide a bigger holistic perspective on man and his behaviour. In the third place, the meta-theoretical approach provides a body of knowledge based on all the systems and sub-systems. Within that body of knowledge it is then possible to contextualise and synthesise (Jordaan & Jordaan, 1989:61-62). Approaching the concept of anxiety within such a meta-theoretical frame of reference will ensure the integrated approach that Barlow and Durand (1995) plead for. It will ensure that all sub-systems that are part of a person's physical body, all his psychological sub-systems namely the emotional and cognitive sub-systems, as well as the various environmental systems that he forms part of and is influenced by, plus all the interactions amongst all these systems, are taken into account.

2.3 CLASSIFICATION OF ANXIETY DISORDERS

2.3.1 The Diagnostic and Statistical Manual III (American Psychiatric Association, 1980) included three disorders of childhood, in which anxiety played a predominant role, in their classification system. These are:

- **separation anxiety disorder**, in which "the predominant disturbance is excessive anxiety on separation from major attachment figures or from home or other familiar surroundings" (p 50);

- **avoidant disorder of childhood and adolescence**, "a persistent and excessive shrinking from contact with strangers of sufficient severity so as to interfere with social functioning in peer relationships " (p 53);

- **overanxious disorder**, where " persistent fearfulness or worry is generalized to future events and meeting expectations coupled with concern about academic and social competence and somatic complaints without physical basis" (Hersov, 1985:370).

2.3.2 In the DSM IV (American Psychiatric Association, 1994) the anxiety disorders are rearranged and reformulated. Apart from separation anxiety disorder, all the other disorders with anxiety as predominant feature, are

classified under the adult headings and not as disorders exclusive to childhood. This has been done to present anxiety disorders on a chronological continuum, rather than as separate childhood and adult disorders. The disorders include

- **panic disorder with or without agoraphobia**, which "is characterized by recurrent unexpected panic attacks about which there is persistent concern" (p 393) with or without agoraphobia;

- **specific phobia**, which is "characterized by clinically significant anxiety provoked by exposure to a specific feared object or situation, often leading to avoidance behavior" (p 393);

- **social phobia**, which is "characterized by clinically significant anxiety provoked by exposure to certain types of social or performance situations, often leading to avoidance behavior" (p 393);

- **obsessive-compulsive disorder**, which is "characterized by obsessions (which cause marked anxiety or distress) and/or by compulsions (which serve to neutralize anxiety)" (p 393);

- **posttraumatic stress disorder (PTSD)**, which is "characterized by the reexperiencing of an extremely traumatic event accompanied

by symptoms of increased arousal and by avoidance of stimuli associated with the trauma" (p 393)

- **acute stress disorder**, which is "characterized by symptoms similar to those of PTSD that occur immediately in the aftermath of an extremely traumatic event" (p 393);

- **generalized anxiety disorder (GAD)**, which is "characterized by at least 6 months of persistent and excessive anxiety and worry" (p 393);

- **anxiety disorder due to a general medical condition**, which is "characterized by prominent symptoms of anxiety that are judged to be a direct physiological consequence of a general medical condition" (p394);

- **substance-induced anxiety disorder**, which is "characterized by prominent symptoms of anxiety that are judged to be a direct physiological consequence of a drug of abuse, a medication, or toxin exposure" (p 394);

- **anxiety disorder not otherwise specified**.

Because **separation anxiety disorder** usually develops during childhood, it is included under the section "Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence" (p 37).

2.3.3 Childhood disorders are also divided into so-called internalising and externalising disorders. Internalising disorders refer to a broad band of "overcontrolled behaviour comprising factors of anxiety and social withdrawal". Externalising disorders refer to "undercontrolled dimensions comprising inattentiveness, nervous-overactive and aggressive behavior" (Hersov, 1985: 368).

2.4 INCIDENCE OF ANXIETY DISORDERS IN CHILDHOOD

The following conclusions with regard to normative data on the prevalence of fears in children were reported: Girls reported more and also more intense fears than boys (Ollendick, Matson & Helsel, 1985:466; Bell-Dolan et al,1990:759; Spence, 1997:290; Elbedour et al, 1997:496). Findings differed regarding the change of the nature of the fears and anxieties in different age groups.

Strauss, Lease, Last and Francis (1988:433) did find age differences in clinic-referred children with overanxious disorder. These differences did not refer to prevalence. It seems however as though the number of overanxious disorder diagnoses in the younger and older children was the same.

Kashani and Orvaschel (1990:316) studied a community sample and found that anxiety concerns similar to those which constitute anxiety disorders in the DSM III were the most endorsed items on their questionnaires. They found that the rates of anxiety symptoms were fairly similar in the three age groups (young, middle and adolescent), but that the type and content of anxiety varied with age. The anxious 8 year olds had more symptoms of all types of psychopathology than did nonanxious 8 year olds. Anxious 12 year olds had more difficulty in school, poorer self-images, and more symptoms of psychopathology than non-anxious 12 year olds. Finally, anxious 17 year olds had significantly more behavioural problems, mood problems, somatic complaints, school difficulties and poor self-concepts than did non-anxious 17 year olds. These findings would suggest that anxiety has a negative influence on a broad range of behaviours and that this negative impact increases and becomes even more detrimental with age.

It seems as though the prevalence of DSM III anxiety disorders in non-clinical samples ranged from 8.7% to 21% for any anxiety disorders, and in individual disorders it ranged from 1% to 13 % (Bell-Dolan et al, 1990:759; Kashani & Orvaschel, 1990:315). Bell-Dolan et al found that children can display a number of anxiety symptoms without being at risk of developing an anxiety disorder. They concluded that anxiety symptoms in children are a normal developmental phenomenon and not necessarily psychopathological.

Bernstein et al (1996:1112) reported that between 9.8% and 30.6% of non-

referred children report subclinical levels of individual overanxious disorder symptoms. They concluded that anxiety symptoms may be more than a transient developmental phenomenon, which contradicts previous research. Muris, Merckelbach, Mayer and Prins (2000:217) found, however, that childhood fears reflect significant anxiety disorders in a substantial minority (22.8%) of children. They concluded that in most children childhood fears are part of normal development, but that in some children, these fears do reflect serious anxiety problems which interfere with their daily routine.

Seven studies were reported on by Costello and Angold (1995:111-113) for the age range that corresponds with the sample used in this study, namely the middle-childhood group. The prevalence of any anxiety disorder in this age group ranged from 4.7% to 15.4%. The differences in prevalence rates could be because of real differences in the children or it could also be because of poor measurement techniques (Costello & Angold, 1995:115). It would appear that there is a slight increase in anxiety disorders with age, although separation anxiety decreases with age.

Spence (1997:290) found in a community sample that it seemed as though anxiety symptoms in children are structured within categories that seem to indicate discrete anxiety disorders that correspond with the DSM IV classification. She found that the most problematic area would be social phobia, with 14% of children reporting a high score. It also seems that obsessive-compulsive problems were relatively common. She found that the specific disorders became

more differentiated with age (Spence, 1997:292).

In a cross-cultural study where the scores of a group of Dutch children on the SCAS and the SCARED self-report questionnaires, were compared with a group of South African children, the Dutch children's total scores were as follow: SCARED - 20, and SCAS - 20.9 (Muris, Schmidt, Perold & Engelbrecht, in press). The South African data and comparisons will be discussed in more detail in Chapter 3.

It would thus seem as though anxiety disorders do affect a significant number of children and do influence their lives and daily functioning.

2.5 THE CHILD IN SOUTH AFRICA IN 2000

In the light of the meta-theoretical approach advocated in 2.2.6 it would seem important to consider the wider context of the child living in South Africa at the moment if the prevalence of anxiety disorders amongst South African children has to be understood. Since South Africa is a developing country with first world elements, the specific circumstances in which children grow up are unique in several ways. To understand how these unique circumstances impact on child behaviour, it is useful to consider the theory of Bronfenbrenner (1977, 1979, 1986) with regard to child behaviour within a systems approach. He postulated a model in which development takes place which takes into account all the contexts and circumstances which influence the child. He defined the ecology of

human development as "...the scientific study of the progressive mutual accommodation, throughout the lifespan, between a growing human organism and the changing immediate environments in which it lives, as this process is affected by relations obtaining within and between these immediate settings, as well as the larger social contexts, both formal and informal, in which the settings are embedded" (Bronfenbrenner, 1977:514). His ecosystemic model consists of four different levels, namely the microsystem, the mesosystem, the exosystem and the macrosystem.

- Microsystem: This consists of systems where the children are closely involved and where interactional relationships are strong, namely the family, the school and the peer group.
- Mesosystem: On this level the above-mentioned systems interact with one another. These reciprocal interactions and relationships form what Donald, Lazarus and Lolwana (1997:58) call the "local community".
- Exosystem: Systems which influence the child but in which the child is not directly involved, are included here. Examples are the sibling's peer group, the mother and/or the father's place of work, churches, local education or government bodies.
- Macrosystem: This involves dominant social structures such as government, as well as belief systems and sets of values

that influence thoughts and behaviour, in other words the broader social system as a whole.

These four systems interact reciprocally and form a matrix of relationships, with a change in one, filtering through to and affecting all of the other systems. Research has confirmed for instance the relation between severity and impact of political life events exposure and psychological distress in children (Slone & Hallis, 1998:1).

According to Bronfenbrenner (1979, 1986) in Dawes and Donald (2000:3), four factors need to be considered when trying to gain an understanding of child behaviour and development, namely the *person* factors (e.g. the temperament of the child or parent); *process* factors (e.g. the forms of interaction that occur in a family); *contexts* (e.g. families or neighbourhoods); and *time* (e.g. changes over time in the characteristics of the individual or the environment). This corresponds with the metatheoretical approach that was mentioned earlier, which was proposed as the approach with which to consider the concept of anxiety in children.

Dawes and Donald (2000:3) mention the "proximal interaction processes" which, according to them are "the most important in shaping stable aspects of development". Proximal processes refer to interactions between children and other people. These processes are influenced and determined by the attributes and values and beliefs of the child and the other people, as well as the context

in which these interactions occur. The context of the children's living is therefore of the utmost importance, not only the context as a given structure, but also the changes that occur in the context from time to time.

"Children's perceptions of their contexts are central to an understanding of how they engage with their developmental settings" (Dawes and Donald, 2000: 4). It is not just a case of the environment having an influence on the child, but also how and what the child perceives: "children are active participants in their own development" (Dawes and Donald, 2000: 4). This corresponds with the social constructivist theory about the underlying cause or source of anxiety.

It seems therefore that it is important to consider the context in which South African children, the subjects of this research project, live and develop.

2.5.1 The Social and Political Context

It is not possible to discuss the social and political context of South Africa without mentioning the past.

> "The social and political landscape of South Africa has been shaped by colonial rule and apartheid. The social and economic policies of colonialism, exaggerated under apartheid, were designed to maintain white hegemony and prosperity to the exclusion of other South Africans" (National Department of Education South Africa, 2000: 8).

To understand the full implication of the abovementioned statement, it would be enlightening to consider South Africa's census figures: South Africa has a population of approximately 43.1 million people. African blacks constitute the majority of the population (76.7%), with the balance being whites (10.9%), Coloureds (8.9%) and Indians (2.6%) (South African Institute for Race Relations, 1999:7). This means that ±88% of the population used to be excluded from the political structures and processes in the country before 1994. From 1948 till 1994, the government used legal measures to control and organise the most personal details of these people's lives (Burman, 1986:5). The result of this is that the circumstances in which the majority of families have lived and still live, have impacted negatively in their capacity to meet the most fundamental needs of their children. "Deprivation, violence, malnutrition, poor health, inferior education and discriminatory social security systems have created profound inequalities between children in different racial groups and geographical areas and between genders (Biersteker & Robinson, 2000: 26).

The experiences of all the disadvantaged people contributed to the formation of certain cultural practices, which according to Dawes and Donald (2000:15), are important because it provides a better understanding of the way adult behaviour towards children is rooted in local beliefs about what has to be done and how children ought to be brought up. They quote Miller and Goodnow (1995) as saying that cultural practices are actions, beliefs and values, shared by groups of people, and invested with normative expectations. They include ideas about

the nature of natural and moral behaviour, and include activities that could be seen as part of a group's identity.

The 7 to13 year olds of 2000 would have been born before the new democratic dispensation in SA, after 1994, but they are being brought up and taught within the cultural practices formed during the apartheid era. This applies to all the different groups in SA. When looking at anxiety from a meta-theoretical perspective, it is important to remember the influence of cultural practices on child development and the possible causalities underpinning specific behaviours, feelings and experiences. Examples of such influences are poverty, high crime rate and poor health services.

To add to the structural context, apart from the racial divisions, there are also other dividing lines inherited from the past. Urbanisation has isolated rural areas from social development processes. Gender is also a factor in poverty. Female-headed households fall 50% more in the poverty classification than households headed by men (National Department of Education South Africa, 2000:8). Approximately 52% of the population is female, and 34% is under the age of 15 years. The growth rate of the population decreased during the last decade to 1.9% (National Department of Education South Africa, 2000:9).

There are 11 official languages, with isiZulu the most widely spoken(22.9%), then isiXhosa (17.9%), then Afrikaans (14.4%) (Statistics South Africa, 2000).The largest religious grouping in SA is Christian although there are large

Muslim, Jewish and Hindu communities as well (National Department of Education South Africa, 2000:9).

The Human Development Index (HDI) is an indicator of socio-economic development and comprises three factors: life expectancy, per capita income and level of education. It is measured on a scale of 0 to 1. In 1980, SA reported an HDI of 0.557, in 1991 0.677 and in 1993 0.649. It was ranked 100th out of 174 countries (Biersteker & Robinson, 2000:29). At present it has risen to 0.717 for the country, but there are wide variations from province to province. In the Western Cape for instance, it is 0.826 and in the Eastern Cape 0.507 (National Department of Education South Africa, 2000:9). This is significant for the present study which looked at anxiety among a group of children in the Western Cape.

Gillwald (2000, in National Department of Education South Africa, 2000:9) talks about the "digital divide". Only 56% of all South Africans have access to electricity. Nine % of households have a telephone. In 1998, 3% of the African population owned cellular phones as opposed to 19% of the white population.

As far as household structure and composition is concerned, in 1998 it was estimated that just over half of South African households were nuclear in structure; most of the rest are extended or multiple (Simkins,1988:41). According to this study there was a weak trend towards the nuclear family.

Crime has become one of the major social factors to be considered when talking

about the context in which the children of South Africa grow up. Because of the moratorium on statistics regarding the prevalence of crime, it is difficult to obtain trustworthy and precise figures. In 1998 there were 54 293 murders and attempted murders in South Africa. This represented an increase of 7.8% from 1994 to 1998. There were 42 429 rapes and attempted rapes during 1998 which was an increase of 16.1% as from 1994 (South African Institute for Race Relations, 1999:50).

The first democratic elections were held in 1994 and the Constitution of South Africa was adopted in 1996. These events provided the basis for the redress of past divisions, the address of human rights and equity and "at the same time to celebrate a cultural and social diversity upon which an innovative and enriched nation can be built" (National Department of Education South Africa, 2000: 9).

2.5.2 The Economic Context

The main features of the economy in SA are the enormous dilemma of poverty among the greater part of the population, unemployment, the slow economic growth rate and the alarming inequalities in the distribution of assets. According to the National Department of Education(2000:11), 88% of the share capital of South Africa is controlled by four large corporations. The poorest 53% of the population is responsible for less than 10% of total consumption, while the richest 6% is responsible for more than 40% of consumption. Nearly half of the population live below the poverty line which is defined as an income of less than

R353 per adult per month (National Department of Education,2000:11).

Biersteker and Robinson (2000:27) provide another description of the living conditions of the people of SA. According to them 60% of all SA children live in poverty. Poverty is defined in this case as the poorest 40% of households. The rural areas accommodate 70% of the poor people of the country.

Biersteker and Robinson (2000:28) quote the Office of the Deputy President (1998) on the following points with regard to poverty in SA: It would seem as though gender does play a role, female-headed households are more likely to be poor than those headed by a resident male. The very young or school-going children in poor homes are larger in number. Race also plays a role. The probability that black groups will be poor is higher than for whites groups. Unemployment leads to poverty. The level of education influences poverty: having less than secondary and post-secondary education increases the probability of being poor.

The effects of poverty on the mental health of children have been well documented according to Pillay, Naidoo and Lockat (1999:178). They quote research by the National Institute of Mental Health (1990) and McLoyd, Jayaratne, Ceballo and Boruez (1994) which refer to problems such as low birth weight, cognitive deficits and developmental problems. Snyman (1998:344) reports that there is a correlation between low socioeconomic status and test anxiety. Van Eeden (1989) speaks about a "culture of poverty" that comes into

existence. This corresponds with the concept of cultural practices which was mentioned earlier in 2.5.1.

2.5.3 Health

The infant mortality rate (IMR) is a common measure of quality of life and socio-economic development (Biersteker & Robinson, 2000:29). It is defined as "the number of live-born children who die before the age of 1 year per 1000 live births" (South African Institute for Race Relations,1999:208). There is a downward trend in the IMR, since 1984 it came down from 51 to 41 in 1994. It is estimated that it will be 50.4 for the Western Cape in 2001.

AIDS is a major factor. It is approximated that at least 1 out of every 10 people in South Africa, is HIV positive (M. Roux, 2001). Whiteside and Sunter (2000:50) put the figure at 22.4% in 1999. Since that figure was arrived at by registering the women who visit health clinics, it could be far higher. It is further approximated that 90% of those that are HIV positive, do not know it. It might not be that the threat of AIDS itself leads to mental health issues, but the impact of the illness does not lie only in the numbers contracting it, but in the numbers affected by it. Families losing a breadwinner or both parents because of AIDS-related conditions leave children destitute, which has implications for the mental health of the children. The level of orphaning thus needs to be considered. Young and middle-aged adults lost to AIDS will result in large numbers of orphans, as well as children growing up in adoptive families and growing up with less adult

supervision and support than would have been the case otherwise (Whiteside & Sunter, 2000:95). It is estimated that by the year 2005, about a million South African children under the age of 15 years, will have lost their mothers to AIDS (National Department of Health in Whiteside & Sunter, 2000:95).

Regarding nutrition, Biersteker and Robinson (2000:32) quote the Office of the Deputy President (1998) as saying that about 39% of people in South Africa have not got enough to eat every day. Food insecurity and insufficient nutrient intake are closely related to poverty and inadequate living conditions. The government has launched wide-ranging programmes to address this need. Richter and Griesel (1994, in Biersteker and Robinson, 2000:34) say that the social and emotional development of children can be affected by malnutrition because it affects the caregivers, in other words the micro-, meso- and exosystems are involved. The government has instituted the Free Health Care policy for pregnant women and children under six years of age in an attempt to spread the provision of healthcare more fairly.

The status of child health and nutrition was summarised in this way by Biersteker and Robinson (2000:32). In 1994, the infant mortality rate (IMR) for Africans was 54.3 per 1000 live births, whereas the IMR for whites was only 7.3 per 1000. There are wide provincial disparities in reported IMR figures, the Western Cape reported an average across all racial groups of 27 per 1000 in 1994, whereas the average IMR in the Eastern Cape was 72 per 1000 in the same year. These figures illuminate the sample used in this study. There are significant differences

between provinces with regard to immunisation. While the average immunisation coverage at 74,7% (in 1994) was high, children in rural areas had a far lower rate of immunisation than children in urban areas. There is a high incidence of low birth weight babies in South Africa - approximately 16% of all births. Among preschool children in South Africa, chronic undernutrition is still a major problem - one in every four children is stunted and one in every ten underweight for age. Of the total number of AIDS cases in SA reported up to December 1994, 10.7% were children. Of all babies in SA, 2.3% were HIV-infected in 1994 - again with wide provincial disparities.

2.5.4 Education

Significant attempts to improve on the past have been made by the Department of Education since 1994. The reformation has included new goals of access, equity, redress, quality, efficiency and democracy (National Department of Education South Africa, 2000:12).

An overview of the South African education system shows that there are 12.3 million learners in the system at present (50.5% female). This system encompasses 29 386 primary and secondary schools, with 375 000 educators, 5 000 inspectors and subject advisors and 68 000 officials, managers and support personnel. Of all SA children between birth and the age of six, only between 6% and 9% have access to Early Childhood Development (ECD) facilities. School enrolment has remained more or less stable since 1997, at just

over 12 million learners. Many under-aged as well as over-aged learners are still in the system. Even though enrolment is substantial, it seems as though flow-through rates are insufficient. On average it takes 8.8 years to complete Grade 7 and 18 years to reach Grade 12.

The inequities that were inherited from the previous political system continue to contribute to adverse schooling circumstances for the greater portion of the learner population.

> "While a small proportion of schools historically serving white learners were well-resourced schools - including resourced libraries, computer centres, and scientific laboratories - the vast majority of children in South Africa continue to be educated in conditions of extreme neglect. In 1996, one in four schools had no water within walking distance, and nearly one in ten had to get their water from dams and rivers. Over half (57%) do not have electricity. Over half (52%) have pit latrines for toilets, while 13 % have no ablution facilities at all. There is no learning equipment in 73% of schools, and 69% have no learning materials" (National Department of Education South Africa, 2000:16-17).

These are national figures and there are wide discrepancies among the provinces.

2.6 ASSESSMENT OF ANXIETY IN CHILDREN

2.6.1 Background

The factors explored in 2.5 make it difficult to assess the children of South Africa for anxiety symptoms. Culture could emphasise particular symptoms, assigning unique attributes to the intensity of their experience as well as expression, and giving shape to the nature of a person's emotional life. The threshold at which "normal" is demarcated from "abnormal" may vary according to gender, ethnicity, cultural group, socio-economic status and the community in which the children live. In the light of the argument that anxiety as such could be approached meta-theoretically, making it necessary to look at the concept contextually, the assessment procedures available for clinical use as well as research must be questioned.

Standardised instruments provide means to compare different groups or samples, but not really cross-culturally. There are four possible reasons for this:

- Questions in standardised instruments may be impossible to understand for different cultural groups.
- Some questions may be unacceptable to members of other cultures.
- Some questions may prove irrelevant cross-culturally.
- Some questions may either lead to incomplete answers or fail to consider local equivalents.

These do not include the language issue. Members of different cultures have different home languages, which necessitate translation procedures. This would involve the translation into the language in question, a back translation by another translator into English and then the assessment of the instrument in the new language would have to be standardised.

The DSM IV (American Psychiatric Association, 1994: 843) states that regarding diagnoses of disorders "...it is important that the clinician take into account the individual's ethnic and cultural context in the evaluation of each of the DSM IV axes". The clinician may provide a run-down for each of the following concepts:

- Cultural identity of the individual
- Cultural explanation of the individuals' illness
- Cultural factors related to psychosocial environment and levels of functioning
- Cultural elements of the relationship between the individual and clinician
- Overall cultural assessment for diagnosis and care.

It would seem therefore that the assessment of anxiety in South African children might prove problematic because all assessment procedures are standardised for Western populations. It would nevertheless be necessary to know what is available.

Stallings and March (1995:127) contend that it is important to have instruments that specifically address anxiety in children and adolescents. There are two reasons for this. The first is that children appear to undergo a developmental progression in anxiety symptoms, both normal and pathological, characterised by both longitudinal and cross-sectional comorbidities that are quite possibly unique to young persons. Children's environmental context differs from that of an adult, so the presentation of anxiety can be different.

According to Stallings and March (1995: 127) the ideal assessment instrument for anxiety should

- provide reliable and valid identification of symptoms amongst multiple possibilities
- highlight symptom clusters
- give an indication of the severity of the symptoms
- make it possible to observe from different angles (for instance child and parent ratings)
- be sensitive to the effects of treatment
- facilitate communication amongst all involved groups of people.

Added to these are more general criteria such as the following:

- The assessment instrument must be relevant and appropriate to client groups.

- The procedures must be simple and uniform.
- The assessment instrument must reflect the perspectives of relevant participants.
- Psychometric adequacy must be achieved.
- The assessment instrument must be inexpensive.
- Quick easy feedback and norms must be possible.
- The assessment instrument must be useful in clinical service.
- The assessment instrument must be compatible with diverse theories (Achenbach, 1994).

2.6.2 A Brief Overview of Some of the Most Prominent Assessment Instruments

2.6.2.1 Semistructured interviews

The Anxiety Disorders Interview Schedule for Children (ADIS-C: Silverman & Nelles, 1988) is considered to be the premier instrument for assessing anxiety disorders in youth (Ronan, 1996). Less well known is the Children's Anxiety Evaluation Form (CAEF: Hoehn-Saric, Maisami & Wiegand, 1987).

In South Africa the Schedule for Affective Disorders and Schizophrenia in School-aged Children (K-SADS: Puig-Antich & Chambers, 1978) is used by the Unit for Anxiety Disorders at Tygerberg Hospital (Kaminer, 2000). Diagnoses developed using the K-SADS are based on clinical judgment rather than on algorithms. Experienced clinicians would thus be required as interviewers

(Stallings & March, 1995:128). This would make it an exclusive tool for clinical use.

2.6.2.2 Self-report inventories

Self-report inventories are among the most widely used childhood anxiety assessment methods (Kendall, Kortlander, Chansky & Brady, 1992:870).

The Revised Children's Manifest Anxiety Scale (RCMAS) has 37 items, of which 28 tap various features of anxiety, and the rest forms a Lie scale (Ronan, 1996:73). Factor analysis has supported a generalised anxiety second-order factor as well as three first-order factors, namely Physiological Anxiety, Worry and Oversensitivity and Concentration Anxiety (Kendall & Ronan, 1990:231). This makes it very useful for the clinical setting.

The State-Trait Anxiety Inventory for Children (STAIC; Spielberger, Edwards and Lushene, 1973) consists of two parts, the "state" and the "trait" versions. Both are 20-item scales rated on a 3-point Likert scale. It would seem as though this inventory is generally regarded as useful for a screening tool (Stalling & March, 1995:135; Ronan, 1996:73,74).

The Fear Survey Schedule for Children-Revised (FSSC-R; Ollendick, 1983) is an 80-item measure that assesses specific fears on a 3-point scale. Extensive research has shown that it is a useful instrument to identify specific fear

sensitivities in individual children (Stalling & March, 1995:135).

Self-report inventories have several limitations among which are:

- They lack situational specificity - they are more general.
- They lack developmental sensitivity.
- Younger children and those whose reading ability is not well developed, will be impaired.
- Children could underreport or deny anxious arousal (Ronan, 1996:78).

On the other hand there are several positive aspects of self-report inventories, namely:

- Children are often more reliable reporters than parents or teachers.
- Some self-report measures such as STAIC and others are useful in the clinical setting to discern between comorbid conditions.
- These instruments are convenient and easy to administer (Ronan, 1996:78).

With regard to the comorbidity issue, research has found evidence for the convergent and discriminant validity of the Children's Depression Inventory (CDI) and the STAIC. Scores for both depressed and anxious children were elevated on the RCMAS. It seemed as though these instruments were useful for screening measures and symptom inventories but not for diagnostic purposes (Hodges,

1990:376).

The discriminant validity of the FSSC-R, the RCMAS and the STAIC-M were researched by Perrin and Last (1992:574) to determine whether they discriminate between anxious and non-anxious children. It was found that anxious and ADHD (Attention-deficit and Hyperactivity Disorder) children differed significantly from never-psychiatrically-ill children on the measures. It did, however, show that anxious and ADHD groups do not differ in their scores. None of the three groups differed on the FSSC-R. Despite the limitations of the study it would thus seem that the discriminant validity of the FSSC-R, the RCMAS and the STAIC-M is suspect (Perrin & Last, 1992:574).

It has, however, been found that the FSSC-R does discriminate among different types of phobias and has potential utility for screening children's phobic disorders (Weems, Silverman, Saavedra, Pina & Lumpkin, 1999:950).

2.6.2.3 Observer rating scales

There are several rating scales filled out by someone who knows the child well. The respondents can be teachers, parents or even peers.

The Child Behavior Checklist (CBCL: Achenbach & Edelbrock, 1983) contains items that are concerned with specific fears as well as more generalised anxiety issues. There are also items that have been clustered to assess Post-Traumatic

Stress Syndrome (PTSD). In addition to the STAIC there is a version which the parents can fill in, the State-Trait Anxiety Inventory for Children-Modification of Trait Version for Parents (STAIC-A-Trait-P). This makes comparisons between the two possible which broadens the base of information (Ronan, 1996:79-81).

2.6.2.4 Other modalities

Direct behavioural observation, physiological assessment and general personality scales could also be used. For the purpose of research into the origins of fear, Muris, Merckelbach and Collaris (1997:931) used what they called a Fear interview, which consisted of open-ended questions such as 'What do you fear most?'. The children were invited to describe several characteristics of their top intense fear, and they were asked to provide details about the intensity and frequency and their reactions to the feared stimulus. This was a useful method of providing information regarding the origins of their fears.

2.6.3 Instruments Used in this Study

The two self-report measures used in this study, the Screen for Child Anxiety Related Emotional Disorders (SCARED) and the Spence Children's Anxiety Scale (SCAS) will be discussed in full in the next chapter. These two questionnaires were selected because of their proven psychometric properties, the convenience of self-report questionnaires and the unique property of identifying different anxiety disorders as classified by the DSM IV.

2.7 SUMMARY

The various theories regarding the origin of anxiety in human beings have converged in a meta-theoretical approach. This approach implies that there could be multiple sources of anxiety as well as multiple processes which could lead to the development of anxiety. The eco-systemic model of a person needs to be considered. All the various sub-systems which make up the physical and psychological person, as well as all the wider systems of which that person is part, need to be taken into account when attempting to study the phenomenon of anxiety.

This, together with the different epidemiological studies, and coupled with the knowledge of the specific developmental stage of middle-childhood, could lead to the conclusion that anxiety may be a normal developmental experience for children in middle-childhood. It could, however, if left unattended to, lead to anxiety disorders later in life. It could also, as such, present as a disorder of childhood.

The discussion in Chapter 1 of the cognitive, moral and social development emphasised the role of other people, life circumstances and culture in this developmental process. This role becomes very significant when considering South Africa's unique circumstances and the particular context in which children have to attempt all their growing up tasks. Anxiety as an accompaniment of childhood seems not too farfetched a concept.

It is clear that the complex nature of anxiety makes assessment of it a difficult procedure. Within the positivist research paradigm, information about a small segment of the phenomenon can be obtained with each research attempt. It is hoped that by developing a holistic view of all the segments produced by research, insight into the necessary preventative work and interventions will become possible.

Chapter 3

RESEARCH DESIGN , METHODOLOGY, RESULTS AND DISCUSSION

3.1 INTRODUCTION

This chapter focusses on the research design, methodology and an in-depth discussion of the results.

When discussing methods, methodology and techniques in the research design, it is important to be aware of what is meant by these terms. Griffiths (1998: 43, as quoted in Gough, 2000a), calls the confusing use of the terms "inherently unstable, precisely because of the depth of argument about them". It is thus imperative that the researcher provide a clear statement of how these terms are to be understood and then also the way that they are going to be used.

Mertens (1998: 2) defines research as follows:

> "...it is a process of *systematic inquiry* that is designed to collect, analyze, interpret, and use *data* to understand, describe, predict, or control an educational or psychological phenomenon or to empower individuals in such contexts. The exact nature of the definition of research is influenced by the researcher's theoretical framework..."

It would seem as though the paradigm that the researcher works from, his/her

epistemology and ontology, would determine the exact meanings of research for the researcher. Until quite recently, researchers in the social and behavioural sciences have adopted the theory-building methods that characterise research in the natural sciences. Other approaches would include the quest for practical solutions to problems, using methods of inquiry specifically fine-tuned by the discipline (Gough, 2000a).

The word methodology comes from the Greek words *metá* (with, after), *hódos* (the way) and *lógos* (reason, account, reckoning). "Thus research methodology can be understood as the reasoning that informs particular ways of doing research, or the principles that inform the organisation of research activity" Gough (2000a). He quotes Harding (1987) as distinguishing between method (the techniques used during the research process) and methodology, which would refer to "a theory of producing knowledge and (which) provides a rationale for the way a researcher proceeds" (Gough, 2000a).

Methodology would then be related to epistemology and ontology. Epistemology refers to the study of knowledge, whereas ontology refers to the study of being. The relationship among these three terms is best explained by the three types of questions that can be asked when generating paradigms, according to Guba (1990, in Mertens, 1998:6):

- Ontological: What is the nature of the 'knowable' (or 'reality')?
- Epistemological: What is the nature of the relationship between the

knower (the inquirer) and the known (or knowable)?

- Methodological: How should the inquirer go about finding out knowledge?

This leads to the different labels that Mertens (1998:7) associates with different paradigms:

- Positivism/Postpositivism: experimental, correlational, causal comparative and quantitative. Gough (2000) sums it up with the word "predictive".
- Interpretive/Constructivist: naturalistic, phenomenological, hermeneutic, symbolic interaction, ethnographic and qualitative. Gough (2000a) distinguishes between interpretative which would hold with internal reality of subjective experience, and constructionist which would hold for socially constructed reality and discourses.
- Emancipatory: critical theory, Neo-Marxist, feminist, race specific, Freirean, participatory and transformative.

Gough (2000a) adds a fourth paradigm of Deconstructivism, with the following labels attached to it: post-structural, postmodernist and post paradigmatic diaspora.

The current research was planned and executed in a postpositivist manner. The assumptions that underlie positivism include the supposition that phenomena in the social realm can be studied in the same way as that in the natural realm, that it is possible to study such phenomena in an objective, value free way. Although

these assumptions are challenged by the meta-theoretical approach and the eco-systemic perspective that was advocated in Chapter 2, this does not necessarily devalue research done in the positivist/postpositivist manner. A combination of the so-called interpretative (humanistic) and the explanatory (scientific) research paradigms, or what is also called a unified approach, is called for by several researchers (Husén, 1999:38; Keeves, 1999:10,11). In Chapter 4 recommendations for follow-up studies will be done with this borne in mind.

3.2 METHOD

As mentioned in Chapter 1, this investigation was the independent South African leg of an international cross-cultural study to examine DSM-defined childhood anxiety symptoms in a non-Western country. For this purpose, 7 to 13 year old learners of four primary schools in the Western Cape were asked to complete two questionnaires, namely the Spence Children's Anxiety Scale (SCAS) and the Screen for Child Anxiety Related Emotional Disorders (SCARED).

3.2.1 Subjects

As discussed in Chapter 1, the population of this study is 7 to 13 year old learners in the Western Cape. The population can be identified as the enrolled learners in primary schools in the Western Cape. A convenience sub-population of all such learners in the Stellenbosch area was decided upon. Keeping the diversity within the population in mind, four schools were found which

represented approximately the same proportions with regard to ethnic groupings as the composition of the Western Cape. If one randomly selects people from a population, these characteristics of the population may or may not be represented. This quota sampling or stratification ensures that they will be represented (Creswell, 1994:120). Each of the principals was asked to select one class from grade 3 to grade 7 respectively. The aim was to obtain equal groups with regard to gender and age as well. The specific schools were selected because they represent different socio-economic groups. The sample could be called a stratified or quota purposeful sample or a representative sample as mentioned in Chapter 1. Accessibility to a sample or population is important to consider when the sampling is done (Mertens, 1998:267). In educational settings, it is especially conceivable that the random selection of individual learners from different classes could lead to severe disruption of classes as well as to a lengthy and even impracticable process of data collection. As the WCED specified that the research should cause as little disruption as possible, these factors were taken into account in the sampling process. Limitations already mentioned in Chapter 1, namely the reduced generalisabilty of the results to the greater population, must be kept in mind when discussing the results. Mertens (1998:265, 266) warns against sampling bias, which also refers to the uncertainty whether the sample can actually represent the population as a whole.

The subjects were 617 children drawn from grades 3 to 7 of four primary schools in the area of Stellenbosch. The schools will be called Schools A, B, C and D. The children had a mean age of 10.7 years (standard deviation (SD) = 1.6, range

7 - 13 years). Information on the socioeconomic status of the children was estimated by the headmasters of the schools as low for School A, low to middle for School B, middle for School C and middle to high for School D. Representation by the different ethnic groups in this sample was approximately 22% for Blacks (Xhosas), 44% for Coloureds and 34% for Whites. This corresponds well with the population profile of the Western Cape, which is 21% Blacks, 54% Coloureds and 25% Whites and others (South African Institute of Race Relations, 1999:7). The language distribution was less representative. All the children at School B, C and D had Afrikaans as their home language. The home language of the children at School A is isiXhosa, but they receive most of their schooling in English. The questionnaires were given to them in English and the questions were translated to them by their class teachers if they did not understand them. The questionnaires for the Afrikaans speaking children were translated into Afrikaans by the researcher. The retranslation into the language of the source document (English) was done by Prof P Engelbrecht of the Department of Educational Psychology of the University of Stellenbosch.

Missing values were extrapolated in most cases. However, children with too many missing values (ie, >10 % of the items per questionnaire) were excluded from the data analysis. Eventually, complete data sets were available of 591 children (300 boys and 291 girls) for the SCAS, 610 children (320 boys and 290 girls) for the SCARED, and 537 children (279 boys and 258 girls) for both questionnaires.

3.2.2 Research Instruments

3.2.2.1 The SCAS

The SCAS contains 38 items that can be allocated to the following six subscales: generalised anxiety disorder (eg, "I worry that something bad will happen"), separation anxiety disorder (eg, "I feel scared when I have to sleep on my own"), social phobia (eg, "I feel afraid that I will make a fool of myself in front of people"), panic disorder/agoraphobia (eg, "All of a sudden I feel really scared for no reason at all", "I am afraid of being in crowded places"), obsessive-compulsive disorder (eg, "I have to think of special thoughts to stop bad things from happening"), and physical-injury fears representing specific phobias (eg, "I am scared of insects or spiders").

For the complete questionnaire see Addendum A. SCAS items are rated on four-point scales (0 = never, 1 = sometimes, 2 = often, 3 = always). SCAS total and subscale scores are computed by summing relevant items.

The questionnaire was developed in Brisbane, Australia in 1997, by Susan H Spence. The schools involved in the study were selected to cover the spectrum of socioeconomic status and ethnic mix representative of the general Australian population. A confirmatory factor analysis approach was used to determine which of four possible models offered the best explanation of the data. The four models were a single-factor model, a six-uncorrelated-factor model, a six-correlated-

factor model, and a higher-order model with six first-order factors loading onto a single second-order factor. The six factors related to panic-agoraphobia, social phobia, separation anxiety, obsessive-compulsive problems, generalized anxiety, and fear of physical injury. "Thus, the data were consistent with the structure outlined within the DSM-IV, which assumes that specific subtypes of anxiety disorder can be identified in children" (Spence, 1997: 291). The fact that the correlated-six-factor model provided the best fit, confirmed the comorbidity and strong interrelationships often found among the subtypes of anxiety.

In a follow-up study it was found that the internal consistency of the total score and the subscales was high and 6 month test-retest reliability was acceptable (Spence, 1998:545). Comparisons between clinically anxious and a control group of children showed significant differences in total scores on the SCAS. In the clinical sample the subscale scores corresponded with the anxiety disorders diagnosed clinically (Spence, 1998:654).

3.2.2.2 The SCARED

The SCARED consists of 41 items that can be allocated to five subscales. Four of them parallel anxiety disorders as classified in the DSM-IV, viz panic disorder (eg, "When frightened, my heart beats fast"), generalized anxiety disorder (eg, "I am a worrier"), separation anxiety disorder (eg, "I don't like being away from my family"), and social phobia (eg, "I don't like being with unfamiliar people"). The fifth subscale is school phobia (eg, "I am scared to go to school") which

represents a common anxiety problem in young people. For the complete questionnaire, see Addendum B. Children are asked to rate the frequency with which they experience each symptom using three-point scales (0 = almost never, 1 = sometimes, 2 = often). SCARED total and subscale scores are obtained by summing relevant items.

The SCARED was developed in 1997 by Birmaher et al (1997), using a sample of 341 consecutive referrals to a mood/anxiety disorders clinic in the United States of America. The children and their parents were interviewed using a clinical interview or the Schedule for Affective Disorders and Schizophrenia for School-Age Children - Present Episode (K-SADS-P). This was to determine the diagnoses. The SCARED was then administered to the children. To examine the test-retest reliability of the questionnaire, a group of children were retested an average of 5 weeks after the initial screening. The data were analysed using item analysis and principal-components factor analysis. Internal consistency was measured using coefficient α. Test-retest correlations were measured through intraclass correlation coefficients (ICC's) (Birmaher et al, 1997:546). Both the children and the parent scales produced identical five-factor solutions, with the factors somatic/panic, generalised anxiety, separation anxiety, social phobia and school phobia. The internal consistency of the factor solution was confirmed by coefficient α of values ranging from .74 to .89. Birmaher et al(1997) reported satisfactory test-retest reliability.

Subsequent research on the SCARED revealed that similar results are obtained

when using a community sample instead of a clinical sample (Muris, Merckelbach, Schmidt & Mayer, 1999:99). In 1998 evidence was found that SCARED scores were positively and in a theoretically meaningful way related to the RCMAS and FSSC-R scores, thus providing evidence for the concurrent validity of the SCARED (Muris, Merckelbach, Mayer, van Brakel, Thissen, Moulaert & Gadet, 1998:327). The SCARED was compared with the Children's Anxiety Scale and meaningful correlations were found (Muris, Merckelbach, van Brakel & Mayer, 1999:422,423). Further evidence of the concurrent validity was found when comparing the results to those obtained with the Youth Self-report, a measure of internalising and externalising problems (Muris, Merckelbach, Moulaert & Gadet, 2000:157). When testing whether the SCARED is sensitive to tap post-treatment effects, it was found to be so (Muris, Merckelbach, Gadet, Moulaert & Tierney, 1999:323).

In a follow-up study Birmaher, Brent, Chiappetta, Bridge, Monga and Baugher (1999:1230) found that the SCARED is a reliable and valid instrument to screen for childhood anxiety disorders in clinical settings. They also found promising indications that it could be used as a brief screening inventory for anxiety disorders in epidemiological studies.

Finally the SCAS and the SCARED were used in a large sample of Dutch school children and the results were compared. Results revealed a strong correlation between the total anxiety scores of these measures ($r = 0.89$). Most of the SCARED subscales were found to be significantly connected to their SCAS

counterparts. A confirmatory factor analysis revealed that the subscales loaded uniquely, but on intercorrelated factors. The researchers took these findings as evidence of the concurrent validity of these two measures (Muris, Schmidt & Merckelbach, 2000:333).

3.2.3 Research Procedure

As briefly discussed in Chapter 1, the procedure was started off by applying for permission from the Western Cape Education Department (WCED) to have the questionnaires filled in by school children in the above-mentioned schools during school hours. The necessary permission was obtained (see Addendum C). The headmasters of Schools A, B and C did not require that permission be obtained from the parents. School D did, however, and letters were sent to the parents of all the children who would have been involved in the investigation. For an example of the letter, see Addendum D.

In order to minimise the disruption in the schools, four research assistants were appointed so the children of five classes in the school could fill in the questionnaires at the same time. The research assistants were briefed beforehand regarding the nature of the questionnaires. The individual questions were discussed with them, and they were given the following instructions to give to the children beforehand:

- Everybody is scared some time or other, the feelings that people feel

when scared differ and are not the same for everybody.

- The following are questions concerning those feelings.
- There are no correct or incorrect answers, we would just like to get everybody's honest answers.

The teachers and the research assistants were present during the whole time to provide clarification when necessary and to ensure confidential and independent responses.

Half of the children first completed the SCAS and then the SCARED. The other half filled it in in the reverse order.

Afrikaans versions of the questionnaires were used at Schools B, C and D. The English version was used at School A. Because most of the Xhosa learners seemed to experience difficulty in understanding the English questions, the teachers had to translate for all the classes, even the grade sevens. As none of the research assistants was proficient in isiXhosa, it was not possible to know what the teachers told the children and how they translated and presumably interpreted the questions. This will be discussed in Chapter 4 as a possible limitation of the study.

3.3 RESULTS

3.3.1 Psychometric Properties of SCAS and SCARED

Table 1(a) and Table 1(b) represent the reliability coefficients for the SCAS and the SCARED. Both questionnaires proved reliable in terms of internal consistency. Cronbach's alphas were 0.92 and 0.90 respectively for the total scores on the SCAS and the SCARED. Most of the alpha values for the subscales were well above 0.60 except for the subscale school phobia on the SCARED. Its alpha value was 0.50.

With respect to gender there were significant differences for both the scales (eg, SCAS total anxiety score: $t(589) = 6.4$, $P \leq 0.001$; SCARED total anxiety score: $t(608) = 5.4$, $P \leq 0.001$). It seemed as though girls exhibited significantly higher levels of anxiety disorder symptoms than boys. There was a negative correlation between age and total anxiety score for both scales (eg, r's between age and total anxiety score of both questionnaires were -0.24, $P \leq 0.001$).This would seem to imply that anxiety disorder symptoms decline with age. These tendencies correspond with previous studies mentioned in 2.4.

In Table 2, the correlations while controlling for gender and age, between SCAS and SCARED are shown. The total anxiety scores for the two scale correlated well $r = 0.76$, $P \leq 0.001$. Certain of the subscales also displayed the expected pattern. The SCAS separation anxiety disorder was definitely connected to the

Table 1(a). Means (standard deviations), gender differences, reliability coefficients (Cronbach's alphas), and relationship with age for SCAS

	Total group (N=591)	Boys (n=300)	Girls (n=291)	α	r
Total anxiety score	41.1 (19.5)	$36.2\ (19.3)_a$	$46.1\ (18.3)_b$	0.92	-0.24*
Generalized anxiety disorder	7.4 (3.8)	$6.6\ (3.6)_a$	$8.3\ (3.8)_b$	0.70	-0.14*
Separation anxiety disorder	6.8 (4.1)	$5.6\ (3.9)_a$	$7.9\ (3.9)_b$	0.67	-0.24*
Social phobia	6.9 (3.8)	$6.3\ (3.8)_a$	$7.5\ (3.8)_b$	0.67	-0.08
Panic disorder and agoraphobia	7.1 (5.3)	$6.2\ (5.4)_a$	$8.0\ (5.1)_b$	0.79	-0.35*
Obsessive-compulsive disorder	7.6 (3.8)	$7.1\ (3.9)_a$	$8.1\ (3.7)_b$	0.65	-0.10
Physical-injury fears	5.3 (3.7)	$4.4\ (3.5)_a$	$6.2\ (3.6)_b$	0.66	-0.17*

Table 1(b). Means (standard deviations), gender differences, reliability coefficients (Cronbach's alphas), and relationship with age for SCARED

	Total group (N=610)	Boys (n=320)	Girls (n=290)	α	r
Total anxiety score	33.0 (13.6)	$30.2\ (13.8)_a$	$36.0\ (12.7)_b$	0.90	-0.24*
Generalized anxiety disorder	7.2 (3.6)	$6.6\ (3.5)_a$	$7.9\ (3.5)_b$	0.72	-0.14*
Separation anxiety disorder	7.3 (3.6)	$6.5\ (3.5)_a$	$8.3\ (3.3)_b$	0.72	-0.25*
Social phobia	7.4 (3.1)	$7.0\ (3.0)_a$	$7.8\ (3.1)_b$	0.68	-0.07
Panic disorder	8.9 (5.0)	$8.2\ (5.1)_a$	$9.7\ (4.8)_b$	0.80	-0.30*
School phobia	2.1 (1.6)	$1.9\ (1.6)_a$	$2.3\ (1.6)_b$	0.50	-0.14*

Notes: SCAS=Spence Children's Anxiety Scale; SCARED=Screen for Child Anxiety Related Emotional Disorders. Means with different subscripts differ at $P<0.05$. *$P<0.05$.

SCARED separation anxiety disorder ($r = 0.66$, $P \leq 0.001$) and SCAS panic disorder and agoraphobia displayed a significant correlation with SCARED panic disorder ($r = 0.65$, $P \leq 0.001$). However, it is important to notice the modest correlations between the generalised anxiety disorder and social phobia subscales of both questionnaires (r's

Table 2. Correlation (corrected for gender and age) among SCAS and SCARED

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
SCAS												
(1) Total anxiety score												
(2) Generalized anxiety disorder	0.82											
(3) Separation anxiety disorder	0.84	0.65										
(4) Social phobia	0.72	0.54	0.51									
(5) Panic disorder and agoraphobia	0.83	0.60	0.62	0.49								
(6) Obsessive-compulsive disorder	0.76	0.56	0.57	0.45	0.58							
(7) Physical-injury fears	0.72	0.50	0.61	0.41	0.40	0.40						
SCARED												
(8) Total anxiety score	0.76	0.63	0.63	0.55	0.67	0.61	0.44					
(9) Generalized anxiety disorder	0.59	0.52	0.45	0.48	0.51	0.48	0.30	0.80				
(10) Separation anxiety disorder	0.67	0.54	0.66	0.42	0.56	0.52	0.46	0.81	0.53			
(11) Social phobia	0.52	0.45	0.40	0.44	0.42	0.45	0.27	0.74	0.50	0.54		
(12) Panic disorder	0.67	0.56	0.53	0.45	0.65	0.53	0.38	0.87	0.60	0.61	0.50	
(13) School phobia	0.41	0.29	0.35	0.34	0.35	0.34	0.25	0.58	0.43	0.43	0.30	0.42

Notes: SCARED=Screen for Child Anxiety Related Emotional Disorders, SCAS=Spence Children's Anxiety Scale. N=537. All correlations were significant at P<0.001.

being 0.52 and 0.44, $\underline{P} \leq 0.001$).The convergent validity of the SCAS and the SCARED in this sample of learners in the Western Cape would seem to be only partially supported.

3.3.2 Factor Analysis of the SCAS and the SCARED

To determine the structure of anxiety disorders symptoms in this group of children, an exploratory factor analytic approach was employed. The data from the SCAS and the SCARED were subjected to a principal components factor analysis. An oblique (oblimin) rotation was used as correlated factors were hypothesized. The factor analysis was carried out for the whole sample as well as for boys and girls and also for the different schools separately. It did transpire that, regardless of slight differences for the separate subsamples, in the main the findings were rather similar. Therefore, only the results for the total sample will be discussed hereafter.

Factor analysis of the SCAS data (see Table 3) presented eight factors with eigenvalues greater than 1.0 (ie, 9.2, 1.9, 1.7, 1.5, 1.2, 1.1 and 1.0), accounting for 49.8% of the variance. Inspection of the various solutions presented a four-factor structure that could best be interpreted. These four factors related to (1) Fears: this factor contained all five items of the physical fears subscale complemented with the agoraphobia items of the original panic disorder and agoraphobia subscale and a number of separation anxiety disorder items referring to the early childhood fear of being separated from the parents, (2)

Social phobia: this factor included all original social phobia items and a number of general worry items, (3) Panic disorder: this factor primarily consisted of physical symptom items from the original panic disorder and agoraphobia subscale, and (4) Worry and compulsions: this factor consisted of a fusion of worry items from the original generalized anxiety disorder and separation anxiety disorder subscales and four items referring to compulsions from the original obsessive-compulsive disorder subscale. One item did not load > 0.40 on one of these factors ("When has problem, funny feeling in stomach"). The four factors explained 38.5% of the variance.

Factor analysis of the SCARED items (see Table 4) yielded 11 factors with eigenvalues greater than 1.0 namely 8.6, 2.0, 1.5, 1.5, 1.3, 1.2, 1.1, 1.1, 1.1, 1.1, and 1.0. This accounted for 52.4% of the total variance. Again a four-factor structure appeared to be the most optimal solution. This time a number of items were removed from the analysis because they did not load more than 0.4 on any of the four factors. These included the four school phobia items. The emerging four factors were (1) Panic disorder: this factor contained almost all original panic disorder items and the two scary dreams items of the separation anxiety disorder subscale, (2) Social phobia: this factor mainly consisted of original social phobia items and the two physical symptoms items of the original panic disorder subscale, (3) Generalized anxiety disorder: this factor merely consisted fo items from the original scale, and (4) Separation anxiety disorder: this factor included four items relating to physical separation from the parents. The four factors were responsible for 36.3% of the total variance.

Table 3. Results of the factor analysis (principal components with oblimin rotation) of the SCAS in the sample of 591 children (original scale is given between parentheses).

	I	II	III	IV
Scared of the dark (PIF)	**0.68**			
Scared to sleep alone (SAD)	**0.63**			
Afraid of being alone at home (SAD)	**0.62**			
Scared of spiders or insects (PIF)	**0.59**			0.47
Scared to sleep away from home (SAD)	**0.56**			0.56
Afraid of being in small, closed places (PDA)	**0.56**			0.47
Scared of dogs (PIF)	**0.55**			
Scared of being in high places or lifts (PIF)	**0.55**			
Feels afraid (GAD)	**0.54**			
Scared when travelling in bus, car or train (PDA)	**0.49**			
Scared of going to doctors or dentists (PIF)	**0.48**			
Heart suddenly beats too quickly for no reason (PDA)		**0.69**		
Suddenly really scared for no reason (PDA)		**0.68**		0.40
Suddenly trembles or shakes for no reason (PDA)		**0.66**		
Suddenly becomes dizzy for no reason (PDA)		**0.64**		
Suddenly has trouble breathing for no reason (PDA)		**0.61**		
Worries will suddenly get scared for no reason (PDA)		**0.55**		
Afraid of being in crowded places (PDA)		**0.48**		
Bothered by bad or silly thoughts (OCD)		**0.47**		
Afraid of looking foolish in front of others (SP)			**0.64**	
Worries will do badly at schoolwork (SP)			**0.64**	
Scared to take a test (SP)			**0.57**	
Afraid to talk in front of class (SP)			**0.55**	
Afraid of using public toilets or bathrooms (SP)	0.41		**0.46**	
Worries about things (GAD)			**0.45**	
Trouble going to school in morning (SAD)		0.41	**0.45**	
Can't get bad or silly thoughts out of head (OCD)			**0.44**	
Worries what others think (SP)		0.44	**0.44**	
Keeps checking if things done right (OCD)				**0.68**
Worries something awful will happen to family (SAD)				**0.63**
Has to do things just right to stop bad events (OCD)				**0.63**
When has problem, heart beats fast (GAD)				**0.61**
Worries being away from parents (SAD)				**0.60**
Worries something bad will happen to self (GAD)	0.40	0.41		**0.58**
Has to think special thoughts to stop bad events (OCD)		0.44		**0.57**
When has problem, feels shaky (GAD)		0.48		**0.54**
Has to do things over and over again (OCD)				**0.49**
Eigenvalue	9.2	1.9	1.7	1.5
% Explained variants	24.9	5.0	4.7	3.9

Notes: SCAS=Spence Children's Anxiety Scale, GAD=Generalized anxiety disorder, SAD=Separation anxiety disorder, SP=Social phobia, PDA=Panic disorder and agoraphobia, PIF=Physical-injury fears. Factor membership is printed in bold. Loadings of <0.40 are omitted for clarity.

Table 4. Results of the factor analysis (principal components with oblimin rotation) of the SCARED in the sample of 610 children (original scale is given between parentheses).

	I	II	III	IV
When scared, feels dizzy (PD)	**0.65**			
When scared, feels like suffocating (PD)	**0.64**			
Scared of having a panic attack (PD)	**0.62**			
When scared, feels like going crazy (PD)	**0.60**			
When scared, feels like throwing up (PD)	**0.58**	0.42		
When scared, feels like fainting (PD)	**0.58**			
People tell look nervous (PD)	**0.53**			
When scared, feels like things are unreal (PD)	**0.49**			
Has scary dreams about bad happening to self (SAD)	**0.46**			
Gets really scared for no reason (PD)	**0.45**			
When scared, sweats a lot (PD)	**0.45**			
When scared, trouble with breathing (PD)	**0.43**			
Has scary dreams about bad happening to parents (SAD)	**0.40**			
Shy with unfamiliar people (SP)		**0.63**		
Difficult talk with unfamiliar people (SP)		**0.63**		
Nervous when going to places with unfamiliar people (SP)		**0.62**		
Nervous when watched by other kids or adults (SP)		**0.57**		
Nervous with unfamiliar people (SP)		**0.55**	0.40	
When scared, heart beats fast (PD)		**0.54**		
Worries that bad happens to parents (SAD)		**0.52**	0.44	
Feels shaky and weak (PD)	0.42	**0.47**		
Worries other people like me (GAD)			**0.65**	
Worries things happened in the past (GAD)			**0.60**	
Worries how well I do things (GAD)			**0.59**	
Worries about the future (GAD)			**0.57**	
Worries things are going well (GAD)			**0.53**	
Is a worrier (GAD)	0.43		**0.53**	
Worries being as well as other kids (GAD)			**0.51**	
People tell worry too much (GAD)	0.46		**0.49**	
Worries about sleeping alone (SAD)	0.43			**0.67**
Scared when not sleeping at home (SAD)				**0.58**
Does not like being away from family (SAD)		0.43		**0.53**
Scared being home alone (SAD)				**0.50**
Eigenvalue	7.6	1.7	1.4	1.2
% Explained variants	22.9	5.3	4.4	3.7

Notes: SCARED=Screen for Child Anxiety Related Emotional Disorders, GAD=Generalized anxiety disorder, SAD=Separation anxiety disorder, SP=Social phobia, PD=Panic disorder. Factor membership is printed in bold. Loadings of <0.40 are omitted for clarity.

It would thus seem that the original factor structure obtained for both questionnaires was not repeated in the sample of children in the Western Cape. Only some of the predicted anxiety categories did emerge. In the SCAS and the SCARED, symptoms of social phobia and panic disorder did appear to cluster into factors that could be related to DSM-defined anxiety disorders. In the SCAS, fears, and in the SCARED, generalized anxiety disorder also clustered into factors that could be related to DSM-defined disorders.

3.3.3 Anxiety Level in the Sample of Learners from the Western Cape

In order to obtain an indication of the prevalence of anxiety symptoms in the sample used in this study, each subject's average response was compared to the average score on the Likert scale of the respective questionnaires. In the SCAS with its four-point scale of 0 (never), 1 (sometimes), 2 (often) and 3 (always), all average scores higher than 1.5 were interpreted as more anxious. On the SCAS, 22% of the respondents had an average score of higher than 1.5.

The SCARED has a Likert scale of three possible responses, namely 0 (almost never), 1 (sometimes) and 2 (often). All average scores of higher than 1 were interpreted as more anxious. On the SCARED, 25.6% of the respondents had scores higher than 1.

Table 5 displays mean SCAS and SCARED scores for the children in their different school groups. Analyses if variance with age and gender as covariates

Table 5. Mean SCAS and SCARED scale and item scores of children from different schools.

	School A		School B		School C		School D	
N	114		168		133		122	
Boys/girls	45/69		89/79		72/61		73/41	
SES	Low		Low/middle		Middle		Middle/high	
Language	English		Afrikaans		Afrikaans		Afrikaans	
	Scale M(SD)	Item M(SD)	Scale M(SD)	Item M(SD)	Scale M(SD)	Item M(SD)	Scale M(SD)	Item M(SD)
SCAS								
Total anxiety score	$43.4(18.0)_{a}$	1.1(0.5)	$46.4(17.9)_{a}$	1.2(0.5)	$45.1(18.7)_{a}$	1.2(0.5)	$25.2(15.3)_{b}$	0.7(0.4)
Generalized anxiety disorder	$7.2(3.9)_{a}$	1.2(0.7)	$8.6(3.2)_{b}$	1.4(0.5)	$7.9(3.8)_{a,b}$	1.3(0.6)	$5.2(3.4)_{c}$	0.9(0.6)
Separation anxiety disorder	$7.9(4.2)_{a}$	1.3(0.7)	$7.5(3.8)_{a}$	1.2(0.6)	$7.0(4.0)_{a}$	1.2(0.7)	$3.9(3.1)_{b}$	0.7(0.5)
Social phobia	$6.5(3.9)_{a,b}$	1.1(0.7)	$6.8(3.4)_{b}$	1.1(0.6)	$8.3(3.8)_{c}$	1.4(0.6)	$5.6(3.6)_{a,d}$	0.9(0.6)
Panic disorder and agoraphobia	$6.9(4.5)_{a}$	0.8(0.5)	$9.2(5.3)_{b}$	1.0(0.6)	$8.1(5.1)_{a,b}$	0.9(0.6)	$2.7(3.4)_{c}$	0.3(0.4)
Obsessive-compulsive disorder	$8.1(3.7)_{a}$	1.4(0.6)	$8.6(3.5)_{a}$	1.4(0.6)	$8.1(3.7)_{a}$	1.4(0.6)	$4.9(3.4)_{b}$	0.8(0.6)
Physical-injury fears	$6.8(3.8)_{a}$	1.4(0.8)	$5.7(3.6)_{b}$	1.1(0.7)	$5.6(3.3)_{b}$	1.1(0.7)	$2.9(2.4)_{c}$	0.6(0.5)
SCARED								
Total anxiety score	$32.2(13.0)_{a}$	0.8(0.3)	$36.5(12.8)_{b}$	0.9(0.3)	$38.8(11.6)_{b}$	0.9(0.3)	$22.9(11.2)_{c}$	0.6(0.3)
Generalized anxiety disorder	$6.8(3.4)_{a}$	0.8(0.4)	$8.0(3.4)_{b}$	0.9(0.4)	$8.6(3.1)_{b}$	1.0(0.3)	$5.4(3.5)_{c}$	0.6(0.4)
Separation anxiety disorder	$7.9(3.4)_{a}$	1.0(0.4)	$8.0(3.4)_{a}$	1.0(0.4)	$8.3(3.3)_{a}$	1.0(0.4)	$4.9(3.1)_{b}$	0.6(0.4)
Social phobia	$6.6(3.0)_{a}$	0.9(0.4)	$8.1(2.6)_{b}$	1.2(0.4)	$9.0(2.9)_{b}$	1.3(0.4)	$5.7(2.8)_{a}$	0.8(0.4)
Panic disorder	$8.7(4.8)_{a}$	0.7(0.4)	$10.2(5.4)_{a,b}$	0.8(0.4)	$10.8(4.4)_{b}$	0.8(0.3)	$5.4(3.7)_{c}$	0.4(0.3)
School phobia	$2.3(1.4)_{a}$	0.6(0.4)	$2.2(1.7)_{a}$	0.6(0.4)	$2.2(1.7)_{a}$	0.6(0.4)	$1.5(1.4)_{b}$	0.4(0.4)

Notes: SCAS=Spence Children's Anxiety Scale, SCARED=Screen for Child Anxiety Related Emotional Disorders. SES=Socio-economic status. Means with different subscripts differ at $P<0.05$ (Bonferroni-corrected).

(ANCOVAs) revealed significant differences in general levels of anxiety symptoms among the four schools [SCAS total anxiety score: F (3.531) = 39.5, P<0.001; SCARED total anxiety score: F (3.531) = 39.6, P<0.001]. Post-hoc tests with Bonferroni correction revealed that the children at School D had significantly lower SCAS and SCARED total scores than children from the other three schools.

SCAS and SCARED subscale scores were subjected to multivariate ANCOVAs. Again significant effects for groups were found [SCAS subscales: $F_{hotellings}$ (18.1574) = 15.6, P<0.001; SCARED subscales: $F_{hotellings}$ (15.1577) = 13.3, P<0.001]. Univariate follow-up ANCOVAs revealed that these group differences were present in all SCAS and SCARED subscales [all Fs (3.531) > 6.0, P<0.001]. Post-hoc tests again showed that children at School D generally displayed lower levels of anxiety disorder symptoms than the children at the other three schools.

3.3.4 Content of Prevalent Anxiety Symptoms in the Sample of Learners from the Western Cape

Mean item scores revealed that symptoms of generalized anxiety disorder (SCAS: M = 1.2, SD = 0.6), social phobia (SCARED: M = 1.1, SD = 0.4), separation anxiety disorder (SCARED: M = 0.9, SD = 0.4), and obsessive-compulsive disorder (SCAS: M = 1.3, SD = 0.6) were relatively prevalent anxiety problems among the children in the sample.

Inspection of the most common anxiety symptoms (Tables 6 and 7) showed that

symptoms of social phobia (SCAS and SCARED), separation anxiety disorder (SCAS and SCARED), and obsessive-compulsive disorder (SCAS) featured especially high in the top 10 of most common anxiety symptoms in the children.

Table 6. Most common SCAS anxiety symptoms amongst children

Total sample (N=591)		M(SD)
1.	Keeps checking if done things right (OCD)	1.7(1.1)
2.	When has problem, heart beats fast (GAD)	1.6(1.1)
3.	Worries something awful will happen to family (SAD)	1.5(1.1)
4.	Worries about being away from parents (SAD)	1.5(1.2)
5.	Afraid of being in small, closed spaces (PDA)	1.4(1.2)
6.	Scared to sleep away from home (SAD)	1.4(1.3)
7.	Scared of spiders or insects (PIF)	1.4(1.2)
8.	Has to do things over and over again (OCD)	1.4(1.1)
9.	Worries will do badly at schoolwork (SP)	1.3(1.0)
10.	Worries something bad will happen to self (SAD)	1.3(1.0)

Notes: SCAS=Spence Children's Anxiety Scale, GAD=Generalized anxiety disorder, SAD=Separation anxiety disorder, SP=Social phobia, PDA=Panic disorder and agoraphobia, PIF=Physical-injury fears.

Table 7. Most common SCARED anxiety symptoms amongst children

Total sample (N=610)		M(SD)
1.	When scared, heart beats fast (PD)	1.3(0.7)
2.	Don't like to be with unfamiliar people (SP)	1.2(0.8)
3.	Don't like to be away from family (SAD))	1.1(0.8)
4.	Shy with unfamiliar people (SP)	1.1(0.7)
5.	Nervous with unfamiliar people (SP)	1.1(0.7)
6.	Difficult talk with unfamiliar people (SP)	1.1(0.8)
7.	Worries that bad happens to parents (SAD)	1.1(0.8)
8.	Nervous when watched by other kids or adults (SP)	1.0(0.8)
9.	Worries about the future (GAD)	1.0(0.8)
10.	Has scary dreams about bad happening to self (SAD)	0.9(0.7)

Notes: SCARED=Screen for Child Anxiety Related Emotional Disorders, GAD=Generalized anxiety disorder, SAD=Separation anxiety disorder, SP=Social phobia, PD=Panic disorder.

3.4 DISCUSSION

Using two self-report questionnaires, the SCAS and the SCARED, the prevalence of anxiety disorder symptoms in a large community sample of children in the

Western Cape was examined.

First of all the psychometric properties of the questionnaires were examined. Both scales proved to be sufficiently reliable. The internal consistency of both scales as represented by the Cronbach's alphas of 0.92 and 0.90 respectively can be considered as sufficient. The convergent validity did seem modest though. Both questionnaires are designed to measure a similar construct, yet the correlation between the total anxiety scores of the two scales was only 0.76.

Previous studies that have examined the connection between SCAS and SCARED (Muris et al, 1999; Muris et al, 2000) have reported considerably higher correlations between the total anxiety scores of both questionnaires (r's being 0.88 and 0.89 respectively). It is important to note however that both those studies have employed the 66-item revised version of the SCARED. This version includes items assessing symptoms of obsessive-compulsive disorder and specific phobias, which would make it more likely to correspond with the SCAS than the original SCARED which was used in this study.

Furthermore, only some of the SCAS scales (ie, separation anxiety disorder and panic disorder and agoraphobia) were convincingly linked to their SCARED counterparts. That might raise questions regarding the validity of the subscales.

Nevertheless, it was found that the tendency of girls to report more anxiety disorder symptoms as found in several studies quoted in Chapter 2 (2.4) was repeated in this study. Although the research results with regard to the tendency

of anxiety disorder symptoms to decline with age, are somewhat conflicting (2.4), the results of this study do confirm that the tendency was repeated.

The original factor structure did not emerge in this sample of children. Although the original structure was not evident there were indications of some of the hypothesized anxiety categories, namely social phobia, panic disorder, fears and generalized anxiety disorder. The first issue that comes to mind is the validity of the instruments for use in the South African context. In the light of the meta-theoretical approach to the concept of anxiety, it would seem important to keep in mind the context in which the subjects live. The contexts of children living in South Africa differ significantly from those in Australia and the United States of America where these two instruments were developed. The application of psychometric instruments to people from different cultural backgrounds has been questioned by several researchers according to Van Wyk, Boshoff and Owen (1999:66). In their study they also found that the metric qualities and metric equivalence of instruments developed in a culture different from the South African sample, appeared to be unsatisfactory. The fact that it was a community sample and not a clinical sample may also have contributed to the different factor structure. Given the different context, cultural and otherwise, the criteria for anxiety disorders according to the DSM-IV, may manifest differently in South African children and therefore will have to be interpreted differently when answering a questionnaire.

Furthermore, the translation of the questionnaires could have caused different conceptualisations of the psychological constructs represented in the

questionnaires. The children from School A whose first language is isiXhosa, and who had to fill in the questionnaires in English may have experienced the questions quite differently from what was intended originally. The limited literacy skills among the younger age groups (Grades 3 and 4) at three of the four schools necessitated lengthy explanations from the research assistants, which could have lead to different interpretations of the questions. Added to that, the translations and interpretations given by the Xhosa-speaking teachers could cast doubts on the validity of the results.

The factor structure differed from the DSM categories highlighted in studies in Western countries. One of the differences is that symptoms of generalized anxiety disorder and obsessive-compulsive disorder load on the same factor. Intrusive thoughts play a role in both disorders (DSM IV, 1994:422,435). Considerable research has been done concerning the differences between worry and obsessional thoughts (Clark & Claybourn, 1997; Langlois, Freeston & Ladouceur, 2000; Turner, Beidel & Stanley, 1992). It could be that the current study utilised a more global assessment of generalised anxiety disorder and obsessive-compulsive disorder, and that that could have lead to the clustering on the same factor. It could also be the case that Western Cape children employ rituals (ie compulsive behaviours) when they are in worrying situations or when cognitive aspects of worry trouble them.

The factor analysis did not support the presence of a clear separation anxiety disorder. The findings of Simkins (1988:41) that only about half of South African households are nuclear in structure and that there is only a weak trend towards

the nuclear family, could shed some light on this finding. If there are that many children living in extended or multiple family structures, it could be that children in South Africa are more flexible concerning the structure of their family units. Then it could be understandable that fears and anxiety related to separation could load on to other factors representing other more general anxiety disorders like fears, worry and compulsions and social phobia.

In analysing the SCARED data, no support for the presence of school phobia was found. The items for this scale did not even load on to any other factor. Considering the socio-economic circumstances in which the most of the children of South Africa grow up (described in Chapter 2), it is conceivable that education can be seen as the pathway to better living conditions. For that reason it is possible that going to school does not cause fear in the children.

The factor analysis of the SCAS and the SCARED data did however, yield four factors that correspond with some of the anxiety disorders classified in the DSM IV (1994). Symptoms of social phobia, panic disorder, fears and generalised anxiety disorder did cluster into solid factors. It would seem therefore, as though some of the DSM-IV anxiety classifications are also valid in South Africa. Further research into this matter, controlling for methodological issues like language, cultural meanings attached to symptoms, the psychometrical properties of the questionnaires, as well as the possible use of interviews, needs to be done before absolute deductions can be made.

It would seem as though 22% to 25.6% of the respondents reported more serious

anxiety symptoms. Compared to the prevalence of anxiety according to epidemiological figures mentioned in Chapter 2, it would seem as though there is an elevated prevalence of anxiety symptoms in learners in the Western Cape. The total score of the Western Cape learners for the SCAS is 41.1 and for the SCARED it is 33. When comparing these scores to the results in a group of Dutch children (Muris et al, in press), they can be considered as elevated scores, which is in keeping with the results of a previous study regarding anxiety and fear in children from the African continent (Ollendick, Yang, King, Dang & Akande, 1996:213). Once again it is necessary to keep in mind the multi-causality of the meta-theoretical approach advocated in Chapter 2. Poverty, high crime rate, poor health expectations, difficult circumstances of education and other contextual factors described in Chapter 2, would seem to indicate that the interactions between children and especially the elements in their meso-, exo- and macrosystems could lead to higher anxiety levels among the children. It is also possible though that given the cultural differences that do exist, that the descriptions of the anxiety symptoms as presented in the questionnaires could be interpreted in different ways that could indicate normative behaviour and not necessarily disorders. The cultural practices (Donald & Dawes, 2000:15) which have been formed and which determine the way in which meaning is constructed, are referred to, here it is the microsystems and the mutual interactions that are at play.

It can be hypothesised that a culturally determined emphasis on self-control, social inhibition, and compliance with social norms could favour the development of fear and anxiety in South African children. That would hold partially true when

related to research findings by Van Heerden (1996: 218) regarding the psychological type preferences according to the Murphy-Meisgeier Type Indicator for Children. According to these findings, Xhosa children show a significant preference for the introverted, sensing, thinking and judgmental type (ISTJ). Attributes of children preferring such a personality type would include the self-control, social inhibition and compliance with social norms previously mentioned (Briggs Myers, 1993:8). Unfortunately that applies only to the Xhosa children and not for the rest which forms 79% of the total sample, indicating the need for further in-depth analyses of contextual information about the experiences and characteristics of the cultural communities and environments in which children live.

The stage of cognitive development of the subjects of this study as described in Chapter 1, refers to the concrete nature of their thinking processes, as well as to the importance of their social interactions to their cognitive growth. According to C.Roux (2001), the Xhosa, as well as the Afrikaans child, grows up in a very strict religious environment. Keeping in mind the moral and religious developmental phase of 7 to 13 year olds, with its emphasis on obedience to rules, concrete understanding of codes of conduct, the important roles of elders, and the value attached to social status and attachment to a nation, it could shed light on the above-mentioned control, inhibition and compliance with social norms that could lead to elevated levels of anxiety.

Within the Western Cape sample there were also interesting differences in the total anxiety scores of the children. Among the children of School D, the total

anxiety scores for the SCAS and the SCARED were 25.2 and 22.9 respectively. Those scores are much lower than the average total scores. Most of the children in that school are white and in a high socio-economic group. They are part of the previously advantaged group in South Africa and would not have suffered the same hardships as the rest of the children. It would, however, not be possible to ascribe the lower levels of anxiety to any of those factors without controlling for a variety of other factors. Another hypothesis could be that the cultural norms of that specific group are the closest to those in Western countries.

When looking at the content of the anxiety symptoms, it would appear as though the symptoms of compulsive behaviours ("Keeps checking if done things right" and "Has to do things over and over again") do feature among the 7 to 13 year old learners in the Western Cape. Ehntholt, Salkovskis and Rimes (1999) found some evidence of obsessive-compulsive effects, namely that people with obsessive tendencies are more likely than people with other anxiety symptoms to link their self-worth to other people and their relationships. "They regarded the possibility of causing harm as likely to result in other people making extreme negative and critical judgments of them..." (Ehntholt, Salkovskis & Rimes, 1999:771). The dominant social structures of the past in South Africa, belief systems and sets of values like apartheid, where certain groups of people were extremely negatively prejudiced against others, and where the self-worth of some groups was decided upon by others (Foster, 1994:220-239; Gwalla-Ogisi, 1990:277; Nasson, 1990:49; Nkomo, 1990:294; Samuel,1990:18,19; Whiteside&Sunter, 2000:64;) do seem to point to macro-system factors that could possibly have contributed to the specific content of the anxiety symptoms

displayed by this sample.

Although separation anxiety did not emerge as a factor, several responses like "Doesn't like being away from family" and "Worries that something bad will happen to parents" seemed to be popular responses. This could possibly refer to the high crime rate in South Africa where the loss of a parent or family member is a bigger possibility than in most other countries in the world (South African Institute for Race Relations, 1999:54).

Symptoms of social phobia like "Don't like to be with unfamiliar people", "Shy with unfamiliar people" and "Difficult to talk to unfamiliar people" were also popular responses. This could be linked to the tendency to social inhibition that was previously discussed. Ingman, Ollendick and Akande (1999:343) suggest that African countries stress more obedience, self-control, emotional restraint and compliance to social rules, and that this may account for elevated fears regarding social interaction. This supports the hypothesis regarding the personality preferences previously suggested. They also suggest that poorer socio-economic conditions may contribute to overall higher levels of life stress and resultant fears, which is in keeping with previous research mentioned (Ingman, Ollendick & Akande, 1999:343; Van Eeden, 1989).

Although this study does have several limitations (discussed in Chapter 4), the data would indicate that the SCAS and the SCARED could be useful instruments for assessing childhood anxiety in South Africa, and could be used in preventative interventions. Further research necessary before that would be possible, will be

proposed in Chapter 4. It should however be borne in mind that all the eco-systems influence the developmental stage of these learners as well as the possible experience of anxiety disorder symptoms of the learners in South Africa.

In Chapter 4 the conclusions that can be drawn from these results will be summarised. The implications thereof and the limitations of the study will be discussed. Further research in this field will be suggested.

Chapter 4

CONCLUSIONS, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

This chapter will contain brief remarks regarding the conclusions drawn from the research. These conclusions will have certain implications for the use of the questionnaires in the South African context. Possible limitations of the study will be highlighted, which will lead to several recommendations regarding further research in this field.

As stated in **Chapter 1**, the objectives of this study were to examine the psychometric properties of the SCAS and the SCARED in a group of 7 to 13 year old learners in the Western Cape, to examine a factor analysis of the data, to look at the prevalence of anxiety in this sample, as well as the specific content of the subjects' answers. In **Chapter 2** a literature review was undertaken to shed light on the concept of anxiety. The meta-theoretical approach to the etiology of anxiety was put forward as a way to explain the complexities of the concept. The contextual factors that contribute to the way South African children negotiate their road to adulthood were highlighted as well as the different anxiety disorders recognised in childhood and the different instruments available for the assessment of anxiety. **Chapter 3** focussed on the research methodology, the research process, the results and a discussion of the results.

4.2 LIMITATIONS OF THIS STUDY

Before conclusions can be reached, it is necessary to keep in mind certain interpretation issues in quantitative analyses which are relevant to this study.

4.2.1 Issues Related to Language Differences

The translations of the questionnaires could have played a role in the outcome of this study, in the sense that the psychological constructs represented by the questions could have differed from the ones in the original language, although a process of back translation was used. At the one school the home language of the children is isiXhosa and they had to answer the questions in English. This could have lead to different interpretations of the questions. Because the researcher and the research assistants are unable to speak isiXhosa, they had to rely on the isiXhosa speaking teachers to translate the questions when necessary.

The limited literacy skills among the younger age groups (Grades 3 and 4) at three of the four schools, including the isiXhosa speaking group, necessitated lengthy explanations from the research assistants and teachers which could have lead to different interpretations of the questions.

4.2.2 Sample

Although an attempt was made to obtain a representative sample of the learners

in the Western Cape, it was a non-probability sample and therefore the results cannot be extrapolated to the whole of the population. The control for the socio-economic circumstances of the subjects was an approximated one on the basis of the headmasters' judgment.

The sample that was used was a community sample. A community sample refers to subjects who have not been referred for the purpose of clinical diagnoses and or treatment. If a clinical sample could have been included, it would have provided additional information that was backed up by clinical diagnoses. A clinical sample refers to a group of subjects found at clinics or hospitals, having been referred for professional services. This could have shed light on the prevalence of specific diagnoses of anxiety disorders and the correlation of that with the data obtained by the SCAS and the SCARED.

4.2.3 Method

As was quoted in Chapter 1 (Mouton, 2001:153) , a survey can lack depth and an insider perspective which could lead to surface level analyses. The data could possibly be sample and context specific, and therefore not generalisable to the whole population.

4.2.4 Measuring Reactivity

Measuring reactivity could have played a role in the results. That refers to the fact that the subjects could have manipulated their responses by trying to please the

researcher or give the answers that they thought was expected of them (Huysamen,1993:55) . Although the importance of honest recording was stressed before the testing, it could have been made more clear to the subjects.

4.3 CONCLUSIONS

Hypothesis 1: The psychometric properties of the two questionnaires, the SCAS and the SCARED, will prove sufficient in a sample of learners in the Western Cape.

Although the internal consistency of the two questionnaires used in this study, was sufficient, it can be concluded that the construct validity of the instruments was doubtful, although the expected differences with regard to age and gender would again seem to confirm it (Huysamen,1996:117-120). The correlation between the two instruments was of a modest kind and only a few of the subscales were convincingly linked to their counterparts.

Hypothesis 2: The childhood anxiety symptoms, as measured by the SCAS and the SCARED, of learners in the Western Cape, will cluster into categories in keeping with the anxiety disorders as described in the DSM-IV.

The original factor structure did not emerge in this sample of children. In several studies elsewhere it did emerge convincingly.

Some anxiety disorders did emerge in the factor structure and others not. That

could be explained by either the psychometric properties of the instruments for use in the Western Cape or even in South Africa, or the conceptualisation of anxiety disorders as they manifest among children in South Africa.

Despite these reservations about the results, it is important to note that four factors were yielded that did correspond with DSM IV (1994) categories of anxiety disorders. These were social phobia, panic disorder, fears and generalised anxiety disorder. This provides an optimistic possibility that given that methodological issues could be addressed, some useful work could possibly be done with the instruments.

The fact that some of the psychometric properties of these two instruments are promising, would seem to indicate that it might be worthwhile to further explore the use of the instruments among South African children.

Hypothesis 3: The prevalence of anxiety symptoms, as measured by the SCAS and the SCARED, in a sample of learners in the Western Cape, will correspond with figures obtained from research in other parts of the world.

The sample of learners used in this study reported a high amount of anxiety symptoms. It also seemed as though there are differences in the reporting of anxiety symptoms amongst children from the different socio-economic groups. This suggests dynamic eco-systemic interactions in this specific age group. Results did concur with results in other studies, concerning gender and age. It seemed as though girls exhibited significantly higher levels of anxiety disorder

symptoms than boys. There were also indications that anxiety disorder symptoms declined with age. This hypothesis would thus seem as partially supported.

Hypothesis 4: The content of prevalent anxiety symptoms, as measured with the SCAS and the SCARED, in a sample of learners in the Western Cape, will correspond with that in children from other parts of the world.

It can be concluded from the prevalence of certain responses that were common responses, that the eco-systems of which the children in the Western Cape specifically, and in South Africa in general, form part, could play a significant role in the etiology of their anxiety symptoms. The broader social system, in other words the macro-system, and the way it impacts on aspects like self-esteem, and on the cultural practices within which children are brought up today, as well as all the other systems of which the children are part, could play a role in the development of these anxiety symptoms.

Hypotheses1, 2 and 4 as stated in Chapter 1 do not appear to be supported by the findings of this study. Hypothesis 3 was partially supported by the results.

4.4 RECOMMENDATIONS

In the light of this study, the following recommendations are made with regard to further research in the matter of the prevalence of anxiety among children:

4.4.1 Further Research

It would seem as though there are two different directions that further research could branch into, namely another post-positivist study or an interpretative/constructivist study.

4.4.1.1 Post-positivist

4.4.1.1.1 A further in-depth investigation with the SCAS as well as the revised 66-item form of the SCARED should be undertaken with a sample representative of the population of all the children of South Africa.

4.4.1.1.2 Information should be collected in the subjects' dominant language by researchers who are able to use that specific language effectively.

4.4.1.1.3 Researchers need to ascertain the extent to which the psychological concepts being measured have the same meaning across and within the different cultural groups within a sample representative of the whole South African population.

4.4.1.1.4 In order to counteract possible measuring reactivity, care must be given during the initial instructions that only answers that are true for specific respondents are valuable to the researchers.

4.4.1.1.5 To avoid the literacy skills problem experienced in this study, it would be advisable to use 10 to 13 year olds.

4.4.1.2 Interpretative/constructivist

4.4.1.2.1 A follow-up study using an interpretative/constructivist approach of the manifestation of anxiety among children is recommended. In the light of the meta-theoretical approach which was advocated in Chapter 2, and the different research paradigms discussed in Chapter 3, it would seem an appropriate approach to examine the concept of anxiety with for South Africa and its unique circumstances. The social-constructivist approach to anxiety as it is explained by Hallam (1985), mentioned in Chapter 2, and the possible applicability of these theories to the South African context, could be investigated.

4.4.2 Interventions

4.4.2.1 Should abovementioned efforts confirm the high levels of anxiety found in this study, an approach to ecosystemic interventions should be investigated. This refers to the different levels suggested by Bronfenbrenner (Chapter 2), in which the contributing factors can be found.

4.4.2.2 Possible interventions in the form of a Life Skills curriculum should be

investigated. This would enable educators to reach all the children. The school is part of the microsystem of which the child is part. Considering the link established by researchers (Chapter 1) between cognitive functioning and emotional problems of which anxiety is one, the anxiety levels of learners are very important to educators.

4.4.3 Training of Teachers

4.4.3.1 The general training of teachers could include knowledge of the phenomenon of anxiety in this specific age group, the meta-theoretical approach to the etiology thereof, as well as the possible interventions that could ameliorate the severity of the symptoms.

4.4.3.2 Teachers could be specifically empowered with the necessary skills to recognise and address the symptoms of anxiety in the class situation. Knowledge about anxiety would include the insight into when and how to refer learners with serious symptoms for professional services.

4.4.4 Role of Psychologists

4.4.4.1 Formal assessment and clinical diagnoses should always be undertaken by psychologists. They have the necessary training and registration to ensure that ethically correct measures and actions are applied.

4.4.4.2 The development of above-mentioned intervention programmes could be

undertaken by psychologists. Their professional training provides the insight and knowledge which is necessary during the development of such an intervention programme.

4.5 FINAL WORD

During the research process, the researcher became very aware of the complexity surrounding the concept of anxiety. The assessment of anxiety does not seem a simple process either. In South Africa with its political past and all the contextual, economic and cultural diversity, these factors become even more interwoven. It seems important that special care be taken to explore and delve into the richness of the subject, to carry on trying to get to the root of all the questions. Should it be possible to use these instruments in the Western Cape, as well as in South Africa, it could contribute in a major way to the identification and amelioration of potentially debilitating experiences of anxiety among the children of our country.

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ADDENDUM A

SCAS UK/USA/AUS/RSA

What do you have to do?

On the following pages, you will find a list of items that have to do with feelings of anxiety. Read each item and then indicate how frequent you have that anxiety symptom: **never**, **sometimes**, **often**, or **always**. Do not skip any of the items.

Fill this in first:

Name:.....

How old are you?.....

School:.....

Grade:.....

Are you a boy or a girl?.....

1. I worry about things.	☐ never	☐ sometimes	☐ often	☐ always
2. I am scared of the dark.	☐ never	☐ sometimes	☐ often	☐ always
3. When I have a problem, I get a funny feeling in my stomach.	☐ never	☐ sometimes	☐ often	☐ always
4. I feel afraid.	☐ never	☐ sometimes	☐ often	☐ always
5. I would feel afraid of being on my own at home.	☐ never	☐ sometimes	☐ often	☐ always
6. I feel scared when I have to take a test.	☐ never	☐ sometimes	☐ often	☐ always
7. I feel afraid if I have to use public toilets or bathrooms.	☐ never	☐ sometimes	☐ often	☐ always
8. I worry about being away from my parents.	☐ never	☐ sometimes	☐ often	☐ always
9. I feel afraid that I will make a fool of myself in front of people.	☐ never	☐ sometimes	☐ often	☐ always
10. I worry that I will do badly at my schoolwork.	☐ never	☐ sometimes	☐ often	☐ always
11. I worry that something awful will happen to someone in my family.	☐ never	☐ sometimes	☐ often	☐ always
12. I suddenly feel as if I can't breathe when there is no reason for this.	☐ never	☐ sometimes	☐ often	☐ always
13. I have to keep checking that I have done things right (like the switch is off, or the door is locked).	☐ never	☐ sometimes	☐ often	☐ always
14. I feel scared if I have to sleep on my own.	☐ never	☐ sometimes	☐ often	☐ always
15. I have trouble going to school in the mornings because I feel nervous or afraid.	☐ never	☐ sometimes	☐ often	☐ always
16. I am scared of dogs.	☐ never	☐ sometimes	☐ often	☐ always
17. I can't seem to get bad or silly thoughts out of my head.	☐ never	☐ sometimes	☐ often	☐ always
18. When I have a problem, my heart beats really fast.	☐ never	☐ sometimes	☐ often	☐ always
19. I suddenly start to tremble or shake when there is no reason for this.	☐ never	☐ sometimes	☐ often	☐ always
20. I worry that something bad will happen to me.	☐ never	☐ sometimes	☐ often	☐ always
21. I am scared of going to the doctors or dentists.	☐ never	☐ sometimes	☐ often	☐ always
22. When I have a problem, I feel shaky.	☐ never	☐ sometimes	☐ often	☐ always

Go to the next page ☞

23. I am scared of being in high places or elevators.	☐ never	☐ sometimes	☐ often	☐ always
24. I have to think of special thoughts (like numbers or words) to stop bad things from happening.	☐ never	☐ sometimes	☐ often	☐ always
25. I feel scared if I have to travel in the car, or on a bus or a train.	☐ never	☐ sometimes	☐ often	☐ always
26. I worry what other people think of me.	☐ never	☐ sometimes	☐ often	☐ always
27. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds).	☐ never	☐ sometimes	☐ often	☐ always
28. All of a sudden I feel really scared for no reason at all.	☐ never	☐ sometimes	☐ often	☐ always
29. I am scared of insects or spiders.	☐ never	☐ sometimes	☐ often	☐ always
30. I suddenly become dizzy or faint when there is no reason for this.	☐ never	☐ sometimes	☐ often	☐ always
31. I feel afraid if I have to talk in front of my class.	☐ never	☐ sometimes	☐ often	☐ always
32. My heart suddenly starts to beat too quickly for no reason.	☐ never	☐ sometimes	☐ often	☐ always
33. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of.	☐ never	☐ sometimes	☐ often	☐ always
34. I am afraid of being in small closed places (like tunnels or small rooms).	☐ never	☐ sometimes	☐ often	☐ always
35. I have to do some things over and over again (like washing my hands, cleaning, or putting certain things in order).	☐ never	☐ sometimes	☐ often	☐ always
36. I get bothered by bad or silly thoughts or pictures in my mind.	☐ never	☐ sometimes	☐ often	☐ always
37. I have to do some things in just the right way to stop bad things from happening.	☐ never	☐ sometimes	☐ often	☐ always
38. I would feel scared if I had to stay away from home overnight.	☐ never	☐ sometimes	☐ often	☐ always

This is the end of the test

ADDENDUM B

SCARED UK/USA/AUS/RSA

What do you have to do?

On the following pages, you will find a list of items that have to do with feelings of anxiety. Read each item and then indicate whether the item is **not true**, **sometimes true**, or **often true** for you. Do not skip any of the items.

Fill this in first:

Name:.....

Hoe oud is jy?.....

School:.....

Grade:.....

Are you a boy or a girl?.....

1. When I feel frightened, it is hard to breathe.	☐ not true	☐ sometimes true	☐ often true
2. I get headaches when I am at school.	☐ not true	☐ sometimes true	☐ often true
3. I don't like to be with people I don't know well.	☐ not true	☐ sometimes true	☐ often true
4. I get scared if I sleep away from home.	☐ not true	☐ sometimes true	☐ often true
5. I worry about other people liking me.	☐ not true	☐ sometimes true	☐ often true
6. When I get frightened, I feel like passing out.	☐ not true	☐ sometimes true	☐ often true
7. I am nervous.	☐ not true	☐ sometimes true	☐ often true
8. I follow my mother or father wherever they go.	☐ not true	☐ sometimes true	☐ often true
9. People tell me that I look nervous.	☐ not true	☐ sometimes true	☐ often true
10. I feel nervous with people I don't know well.	☐ not true	☐ sometimes true	☐ often true
11. I get stomach aches at school.	☐ not true	☐ sometimes true	☐ often true
12. When I get frightened, I feel like I am going crazy.	☐ not true	☐ sometimes true	☐ often true
13. I worry about sleeping alone.	☐ not true	☐ sometimes true	☐ often true
14. I worry about being as good as other kids.	☐ not true	☐ sometimes true	☐ often true
15. When I get frightened, I feel like things are not real.	☐ not true	☐ sometimes true	☐ often true
16. I have nightmares about something bad happening to my parents.	☐ not true	☐ sometimes true	☐ often true
17. I worry about going to school.	☐ not true	☐ sometimes true	☐ often true
18. When I get frightened, my heart beats fast.	☐ not true	☐ sometimes true	☐ often true
19. I get shaky.	☐ not true	☐ sometimes true	☐ often true
20. I have nightmares about something bad happening to me.	☐ not true	☐ sometimes true	☐ often true
21. I worry about things working out for me.	☐ not true	☐ sometimes true	☐ often true
22. When I get frightened, I sweat a lot.	☐ not true	☐ sometimes true	☐ often true
23. I am a worrier.	☐ not true	☐ sometimes true	☐ often true
24. I get really frightened for no reason at all.	☐ not true	☐ sometimes true	☐ often true

25. I am afraid to be alone in the house.	☐ not true	☐ sometimes true	☐ often true

Go to the next page ☞

26. It is hard for me to talk with people I don't know well.	☐ not true	☐ sometimes true	☐ often true
27. When I get frightened, I feel like I am choking.	☐ not true	☐ sometimes true	☐ often true
28. People tell me that I worry too much.	☐ not true	☐ sometimes true	☐ often true
29. I do not like to be away from my family.	☐ not true	☐ sometimes true	☐ often true
30. I am afraid of having anxiety (or panic) attacks.	☐ not true	☐ sometimes true	☐ often true
31. I worry that something bad might happen to my parents.	☐ not true	☐ sometimes true	☐ often true
32. I feel shy with people I don't know well.	☐ not true	☐ sometimes true	☐ often true
33. I worry about what is going to happen in the future.	☐ not true	☐ sometimes true	☐ often true
34. When I get frightened, I feel like throwing up.	☐ not true	☐ sometimes true	☐ often true
35. I worry about how well I do things.	☐ not true	☐ sometimes true	☐ often true
36. I am scared to go to school.	☐ not true	☐ sometimes true	☐ often true
37. I worry about things that have already happened.	☐ not true	☐ sometimes true	☐ often true
38. When I get frightened, I feel dizzy.	☐ not true	☐ sometimes true	☐ often true
39. I feel nervous when I am with other children or adults and I have to do something while they watch me (for example: read aloud, speak, play a game, play a sport).	☐ not true	☐ sometimes true	☐ often true
40. I feel nervous about going to parties, dances, or any place where there will be people that I don't know well.	☐ not true	☐ sometimes true	☐ often true
41. I am shy.	☐ not true	☐ sometimes true	☐ often true

This is the end of this test

ADDENDUM C

Navrae
Enquiries Sigamoney Manuela
Imibuzo Naicker

Telefoon
Telephone 4036404
Ifoni

Faks
Fax 483-6279
Ifeksi

Verwysing
Reference 9/1/2000
Isalathiso

PROVINSIALE ADMINISTRASIE WES-KAAP
Onderwysdepartement

PROVINCIAL ADMINISTRATION WESTERN CAPE
Education Department

ULAWULO LWEPHONDO LENTSHONA KOLONI
ISebe leMfundo

Dear Mrs M. Perold
University of Stellenbosch
Stellenbosch

RESEARCH PROPOSAL: A cross-cultural study of anxiety disorders symptoms in children

Your application to conduct the above-mentioned research in the Western Cape Schools has been approved subject to the following conditions:

- Principals, teachers and learners are under no obligation to assist you in your investigation.
- Principals, teachers, learners and schools should not be identifiable in any way from the results of the investigation.
- You make all arrangements concerning your investigation.
- Your work should not disrupt the functioning of the school during school hours.
- The investigation is not conducted during the fourth school term.
- There are no financial implications for the Western Cape Education Department.
- A photocopy of this letter is submitted to the principal of each school where the intended research is to be conducted.
- A brief summary of the content, findings and recommendations is provided to the Director: Curriculum Management (Research Section).
- The Department receives a copy of the completed report/dissertation/thesis addressed to:

  The Director: Curriculum Management
  (Research Section)
  Western Cape Education Department
  Private Bag 9114
  CAPE TOWN 8000

We wish you success in your research.

Kind regards

HEAD: EDUCATION
DATE: 10 March 2000

ADDENDUM D

UNIVERSITEIT VAN STELLENBOSCH
UNIVERSITY OF STELLENBOSCH

1 Augustus 2000

Geagte ouers

Ek is 'n M Ed-student in Opvoedkundige Sielkunde. Ter gedeeltelike vervulling van die vereistes vir die kursus is ek besig met 'n navorsingsprojek waardeur ek ondersoek instel na die voorkoms van angstoestande onder laerskoolleerders in die Wes-Kaap. Die instrumente wat ek gebruik is twee vraelyste wat deur die kinders self ingevul moet word. 'n Verdere doelwit is om die psigometriese eienskappe van die vraelyste na te gaan.

Hierdie projek vorm deel van 'n internasionale projek wat deur die Departement Sielkunde van die Universiteit Maastricht gekoördineer word.

Hiermee vra ek dan u toestemming dat u kind/ers hierdie twee vraelyste mag invul. Toestemming van die WKOD is reeds verkry.

Dui asseblief hieronder aan of u toestemming verleen al dan nie. Baie dankie by voorbaat.

Die uwe

Mariechen D Perold

Prof Petra Engelbrecht (Studieleier)

My seun/dogter.....Gr.....mag/mag nie deelneem

aan die navorsingsprojek van Mev MD Perold.

Ouer/voog.....

VERW. / REF.:

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